

Final Environmental Impact Statement

Comments and Responses

Xcel Energy 345 kV Transmission Line
From Split Rock Substation to Nobles County Substation to
Lakefield Junction Substation
And the
115 kV Transmission Line From Nobles County Substation to
Chanarambie Substation
And the Nobles County Substation

In Rock, Nobles, Murray and Jackson Counties

State of Minnesota
Environmental Quality Board
Docket No: 03-73-TR-Xcel

March, 2005

Responsible Governmental Unit

Project Owner

Minnesota Environmental Quality Board 658 Cedar Street, Room 300 St. Paul, MN 55155 EQB Representative: John N. Wachtler (651) 296-2096	Northern States Power Company, a Minnesota Corporation d/b/a Xcel Energy 414 Nicollet Mall Minneapolis, MN 55401 Project Representative: Pamela J. Rasmussen P. O. Box 8 Eau Claire, WI 54702-0008 (715) 839-4661
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ABSTRACT

Xcel Energy has applied to the environmental quality board for one route permit for two new high-voltage transmission lines and one new substation in Southwest Minnesota. The larger of the two lines is an approximately 86-mile 345-kilovolt line running east from the Split Rock Substation near Sioux Falls, South Dakota to the Lakefield Junction Substation in Jackson County, Minnesota. The other is a new approximately 40-mile 115-kilovolt transmission line connecting a new substation near Reading, Minnesota in Nobles County with the existing Chanarambic Substation in Murray County. The route permit will also designate the site for the new Nobles County Substation, which will interconnect the two transmission lines. The two primary routes for the 345-kV line are either along Interstate I-90 or on the same right-of-way as an existing transmission line running two to five miles north of I-90. The potential routes for the 115 kV line mostly follow county roadways or existing 69-kV transmission right-of-way. The routes for the new transmission lines are evaluated based on a number of criteria, including (1) minimizing distances to homes, (2) avoiding farming conflicts, (3) minimizing waterfowl collisions, (4) maximizing wind energy development, and (5) minimizing cost, construction time, and impacts on grid reliability. The formal contested case hearing for the project were held March 1, 2005 through March 4, 2005 in four locations in the project area. Detailed information about project schedule and documents can be found online at <http://www.eqb.state.mn.us/Docket.html?Id=6466>.

Final Environmental Impact Statement

The Final Environmental Impact Statement is divided into the following three sections.

Section 1. Additions to the Draft Environmental Impact Statement;

Section 2. Comment summaries and EQB staff responses;

Section 3. Comments on the Draft EIS, including comments received during EIS scoping period and summary of EIS comments at formal contested case hearings.

This final EIS incorporates by reference the draft EIS, which is available from EQB staff or at the EQB web site:

<http://www.eqb.state.mn.us/Docket.html?Id=6466>

Final Environmental Impact Statement

Section 1. Additions to the Draft Environmental Impact Statement;

This final EIS incorporates by reference the draft EIS, which is available from EQB staff or at the EQB web site:

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Section 1. EIS Revisions and Additions

This section consists of the following four subsections

- 1.1 Revised Table 1 (Replaces Table 1 in Draft EIS, page 8);
- 1.2 Revised maps D5, D6, D7;
- 1.3 Revised Xcel Energy response to Information request 10.
- 1.4 Xcel Energy Responses to EQB information requests 11 through 14, incorporated by reference;
- 1.5 Outage data for Alliant 161 kV line between Split Rock to Heron Lake;
- 1.6. Xcel Energy revised preferred routes.

Section 1. EIS Revisions and Additions

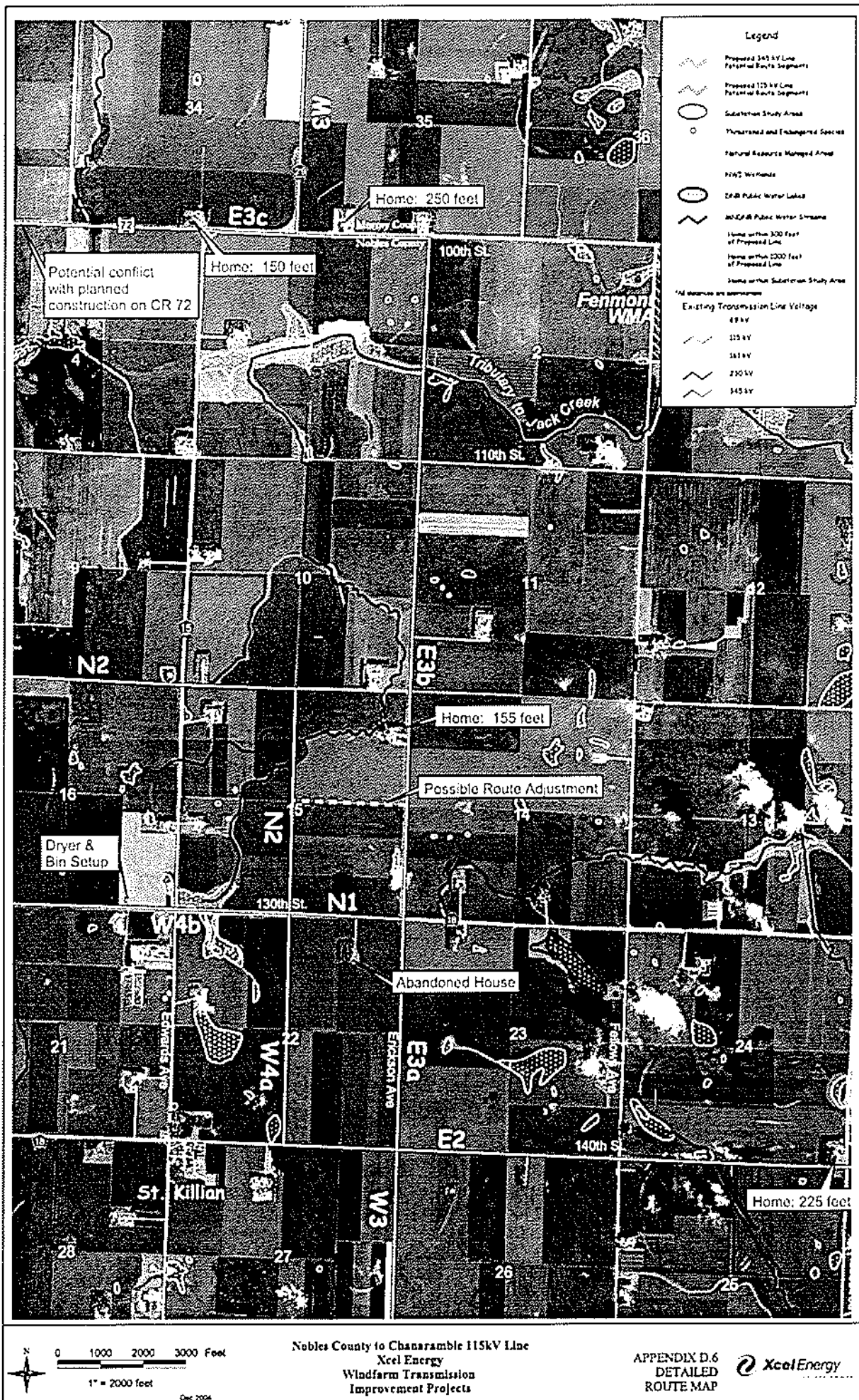
1.1 Revised Table 1 (Replaces Table 1 in Draft EIS, page 8);

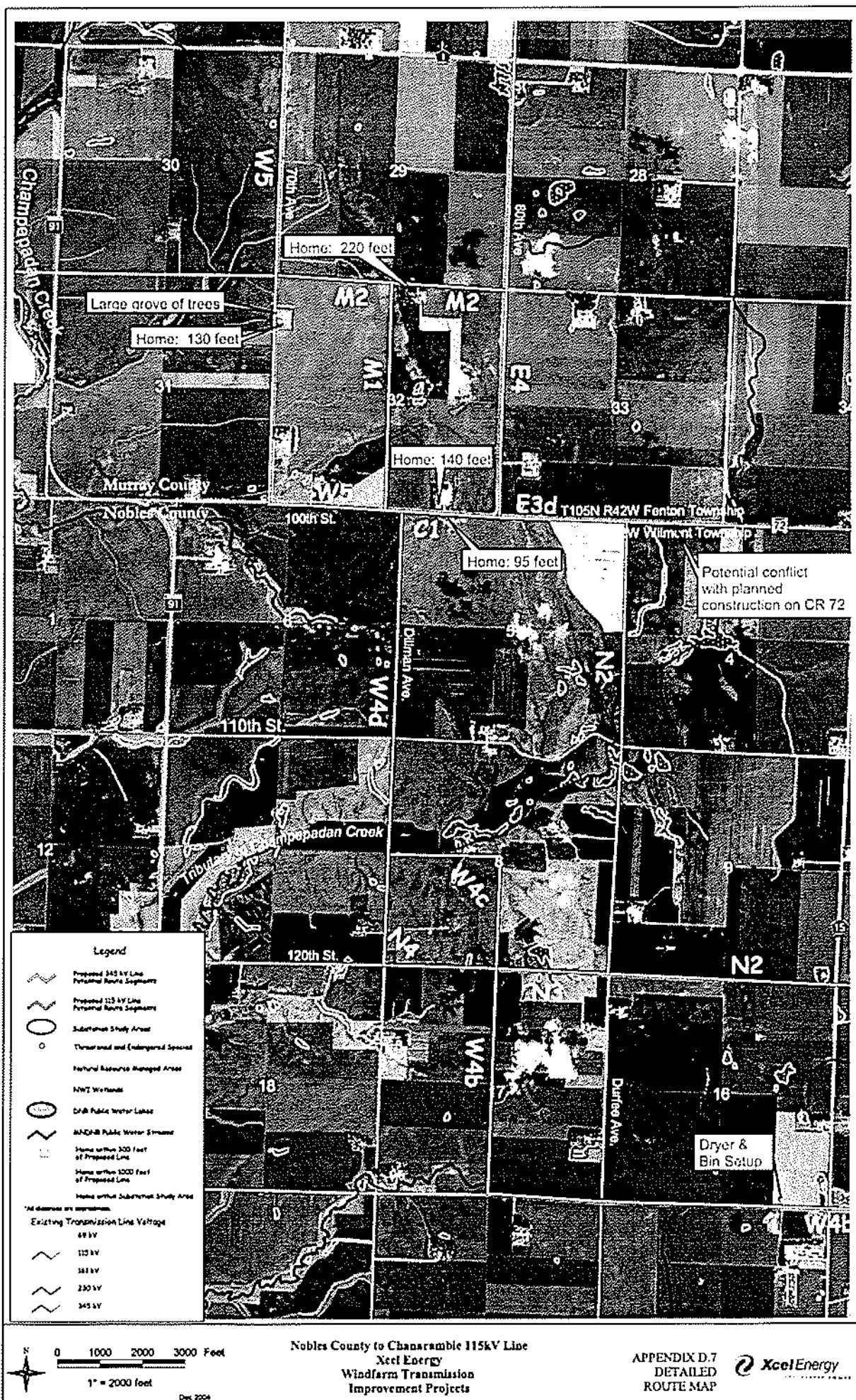
Modified Table 1 - Summary Comparison of Selected Route Options

Route Option	Length	Transmission ROW (miles)	Roadway ROW (miles)	Total NEW ROW Required (Acres)	Houses >300' Total*	Houses <300' Newly Impacted	Houses <1000'	# of WMA and WPA w/in 2 miles	# of PWI Waters Crossed	Corners	Costs
345 kV Route Options											
Route 1											
Xcel InterState-90	88.0	19.5	65.3	692.0	5	2	57	12	28	27	\$51,189,117
Route 1 MODIFIED											
Xcel InterState-90	88.0	18.5	62.4	767.2	5	2	56	15	25	27	\$51,826,592
Route 2											
Xcel Alliant Route	85.7	67.6	6.7	272.3	10	5	30	11	23	25	\$58,320,072
Alliant, Option B (Jackson Co.)	85.2	68.8	8.7	261.3	8	3	26	11	27	23	\$58,549,163
Alliant, Option C (Jackson Co.)	84.7	69.8	6.7	214.8	9	4	33	12	24	21	\$58,283,755
115 kV Route Options											
Route E											
Xcel East	36.6	0.0	35.6	192.3	18	18	16	18	12	12	\$13,417,520
Xcel East, Option B	36.6	0.0	34.6	205.3	15	15	17	15	13	14	\$13,417,520
Xcel East, Option C	37.5	8.5	35.6	153.3	12	12	16	24	11	14	\$15,114,010
Route W											
Xcel West	36.0	13.5	29.1	128.3	10	10	12	8	12	17	\$15,441,670
Xcel West A from Substation C	36.0	13.5	30.1	128.3	10	10	12	8	12	17	\$15,441,670
Xcel West A from Substation A	36.5	13.0	31.2	139.3	12	12	11	9	12	21	\$15,548,680
Xcel Proposed Modified East Route +A4	36.1	7.0	33.1	163.0	13	13	13	12	13	11	\$14,462,490
* Includes residences near existing line											
Substation											
Substation Modifications											
Split Rock											
Lakefield Junction											
Chanarambic											
New Substation											
Nobles County											
Total Costs											
\$22,510,000											

Section 1. EIS Revisions and Additions

1.2 Revised maps D5, D6, D7;





Section 1. EIS Revisions and Additions

1.3 Revised Xcel Energy response to Information request 10.



November 15, 2004

COPY

1414 West Hamilton Avenue
P.O. Box 8
Eau Claire, WI 54702-0008

John N. Wachtler
Minnesota Environmental Quality Board
658 Cedar Street
St. Paul, MN 55155

Re: Docket MEQB No. 03-73-TR-Xcel
EQB Data Request Number 10

Dear Mr. Wachtler:

Here are Xcel Energy's responses to EQB staff's information request number ten (10) regarding the Split Rock to Lakefield 345 kV & Chanarambie to Nobles County 115 kV transmission line project. We are available to provide additional information or meet with you in person to discuss any questions in more detail.

1. *Route segment 18 in the area near Post's house on I-90 in Section 18 of Ewington Township in Jackson County (Map B.17). Please evaluate the approximate cost and feasibility of crossing I-90 to the south side and then crossing back to the north side before or at the point that crossing segment C6 connects to segment 18.*

EQB Request No. 10 – Map 1 is enclosed showing this location. Xcel Energy has reviewed this option using these maps.

As you are aware, the proposed corridor is shown in yellow on the map. While the detail is not shown on the map, it is likely that the transmission line would go around the on/off ramp for County Road 9. As we have discussed previously, Xcel Energy plans to go around any of the on/off ramps along I-90 unless we can span them or get permission from the MN DOT.

A possible route to avoid the Post Home on the north side of I-90 is shown in magenta. This has to be a short reroute since there are two farmsteads on the south side of I-90 that we would try to avoid. This route segment is approximately 700 feet longer than the route on the north side of I-90 and requires four dead end angles. This would add about \$425,000 to the cost of the project.

Xcel Energy has significant concerns with this reroute along the south side of I-90 in this area. Listed below is a summary of concerns and comments about this reroute:

- It will be difficult to avoid impacts to the Little Sioux River Tributary and a potential wetland area based on the aerial photos.



- There are two farmsteads on the south side of I-90 that are much closer than the Post farmstead. The Post house is approximately 290 feet from the I-90 fence. The house for the farmstead near the I-90 and County 9 intersection is approximately 275 feet from the south fence of I-90 and the house for the next farmstead to the west is approximately 285 feet from the south I-90 fence.
- Routing the line on the south side of I-90 would be approximately 700 feet longer than the route on the north side of I-90.
- We would need to cross I-90 twice within one mile. We would prefer to avoid multiple crossings of I-90 due to constructibility and access issues, especially in situations where we cross in areas where there is no road crossing of the Interstate.
- The proposed reroute to the south would add a total of approximately \$425,000 to the project cost.

Xcel Energy does not support this potential reroute since the Company believes the proposed line is a reasonable distance from the Post farm and the additional costs and impacts of moving the line are not warranted under these circumstances.

2. *Route segment I5 in Nobles County just west of Adrian, near some residences and rest stops (Map B.10). Please provide an initial evaluation of the cost and feasibility of crossing I-90 so as to be on opposite side from residences in that area, as well as more detail regarding the feasibility of rerouting the existing 69-kV line if this route is used.*

After discussing this option with you by phone on November 9, we agreed that a response to this data request was not necessary due to additional information. There are no homes closer than 1000 feet along the route where it is on the south side of I-90. EQB Request No. 10 – Map 2 shows this area in more detail.

3. *Route segment I5 on I-90 south of Luverne (B.8). Please provide more detailed evaluation of which side of I-90 is preferable in this area, including an evaluation of how to best avoid conflicts with this expanding industrial area.*

EQB Request No. 10 – Map 3 is enclosed which shows this area in more detail. We have reviewed this area and believe at this time the south side of the Interstate will allow us to best avoid conflicts in this area. However, as you are aware, it is a tight area and after discussing it in more detail with the team, we offer to restrict the line to the south side of I-90 in this area. Xcel Energy does have survey data for this area and can gather more specific information in this area to determine if there are some conflicts. It will take some preliminary design work that we believe we could provide at the public hearings in January.

4. *Route segment W6 along 91st street in front of Post's house at MP32 (D.11). Please assess the feasibility and cost of consolidating a new 115-kV line with both the existing 69-kV line and the feeder line on one set of poles on the north side of 91st street should this route be selected.*



EQB Request No. 10 – Map 4 & 5 shows the location of the Post house. This option was also proposed to Xcel Energy at the public scoping meetings in Chandler last year. It is feasible for Xcel Energy to consolidate the 115 kV and 69 kV lines on one structure—this is the proposed plan in this location. It may be feasible for Xcel Energy to move the line to the north side of 91st street and consolidate the line with the existing double circuit 34.5 kV feeder line in that location. We have marked a potential reroute in red on the north side of 91st street beginning at MP 31.

Listed below are our feasibility and cost concerns for this proposal:

- The double circuit 34.5 kV feeder lines are owned by another party. We are not certain at this time if the owner would support consolidation of all the lines on one structure.
- We do not know what type of outages, if any, we could have for replacing the double, circuit 34.5 kV line with the new line in that area. In addition, some parties have expressed concerns with putting that many lines on one pole in an area where it could have several impacts on wind outlet if there were an outage.
- Placing that many lines on one structure creates clearance, safety and reliability concerns for Xcel Energy. In order to perform maintenance on any of the lines, it is likely we would have to take outages of one or all of the other circuits. In addition, multiple circuits create safety concerns for our linemen working on them. Given this, Xcel Energy limits the number of these types of structures on its system, and only builds them in areas where ROW and access issues limit our options.
- As far as costs, we would expect that adding the double circuit 34.5 kV lines to the structures would add about \$70,000 per mile. We would need two dead end angle structures to cross 90th street that would add approximately \$150,000 to the cost of that route segment. Therefore, it would be about \$220,000 to build the option we have shown in red on EQB Request No. 10 – Map 4 & 5.

5. *Route segment W6 (D.11). Some residents are requesting a more narrow corridor width than Xcel has requested the area between 10th Avenue and the County Line Avenue, and some have expressed a preference for using County Line (although not the resident on that road). Please provide more detail regarding what type of consolidation with the feeder lines or other transmission lines is possible, and what considerations need to be taken into account, including access to the substation. Please note that I am not requesting that the detailed engineering analysis be completed now, just more information on what the possibilities are for consolidation. The issue here is whether it is possible or desirable to complete more detailed design work and have more discussion with local residents now, before the route permit is issued. Or whether it is better to defer detailed discussion with local landowners on exact route until after permit is issued. One possibility is to narrow the potential corridor somewhat, but still allow flexibility in final detailed design.*

Xcel Energy personnel reviewed this option in the field this past week. We have marked the locations of the existing 34.5 kV feeder lines as light blue lines on EQB Map No. 10 –Map 4



& 5. We still believe our proposed route centerline is a good option. We have marked another potential route centerline in light purple. This route goes further to the east and along County Line road. We need to enter the Chanarambie substation from the west, so this option and the one we proposed are feasible and acceptable. We do not plan to go any further north on 10th Avenue for segment W6 than we have proposed, so that area is not under consideration. Xcel Energy would still prefer to have flexibility in siting the line since we expect other development in this area.

6. *Route Segment E5 (D.11). Please provide additional detail regarding which side of the road the new 115-kV would best be placed if that route segment is selected, and the potential for consolidation of new line with the existing feeder lines.*

EQB Request No. 10 – Map 6 shows this area in more detail. We had proposed to move the line from the south side of the road at MP 31 and stay on the north side until MP 36. After comments from landowners along this route and additional review we have determined that we would prefer to move back to the south side of the road. There are two farmsteads at MP 34.5 that are owned by the same family. The farmstead on the south is not occupied and is the location those landowners prefer. We would cross to the south side of the road at MP 34 as shown in light blue on the map. We eventually move to the south side of the road at MP 36, so we do not expect additional costs with this change.

As far as potential consolidation with the existing feeder lines, Xcel Energy would refer you to Question 4 for potential issues that may arise. Xcel Energy does not know at this time if we would consolidate with the existing feeder lines, but would be willing to consider it during the final design of the route.

7. *Route Segment J5 and J6, added in the scoping decision. Both of these route segments, as described in the scoping document, would include a wide corridor in the route permit in order to allow Xcel Energy to work out the best detailed route with nearby residents and landowners should the route segment be chosen by the EQB. However, more detailed review by your engineers would be helpful now in order to provide an initial assessment of the feasibility, cost, and potential routes in these areas.*

EQB Request No. 10 – Map 7 shows this area in more detail. Xcel Energy believes you meant Route Segments J4 and J6. If the EQB selected Route Segment J4 we would prefer to place the line along the road to the west of that segment. Since that does not appear to be an option, we would then place the line in the location marked on the map in magenta. This places it on a more logical division along the quarter-quarter section. We would not be able to span the fields in a way that would minimize impacts to farming operations for Segment J4.

If the EQB selected segment Segment J6, we would follow the western edge of the area marked by the boundary of Segment J6. This would allow us to avoid the low areas on the eastern edge of this segment.



Xcel Energy's main concern with any of the additional segments in this area is that they reduce the use of shared ROW proposed in this area with the Alliant Energy Lakefield Junction to Triboji 161 kV line.

It also appears to Xcel Energy that the only advantage to these additional routes is that they move the line away from one set of landowners and next to a different set of landowners.

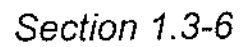
Please feel free to contact me at 715-839-4661 if you have any questions.

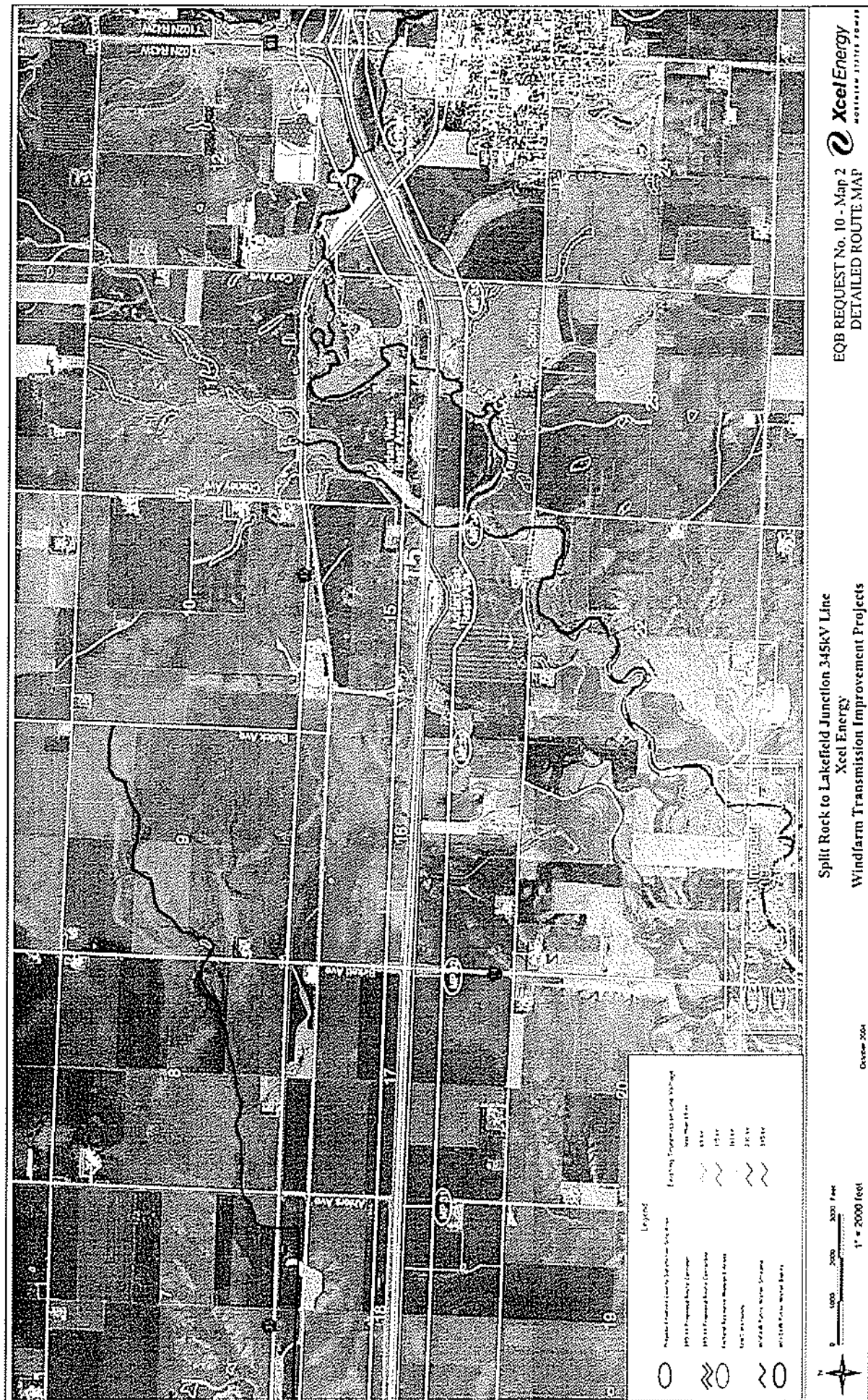
Sincerely,

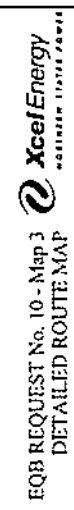
A handwritten signature in black ink that reads 'Pamela Jo Kasmussen'.

Pamela Jo Kasmussen
Team Lead, Siting & Permitting

Enclosures

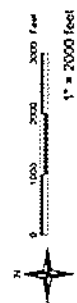


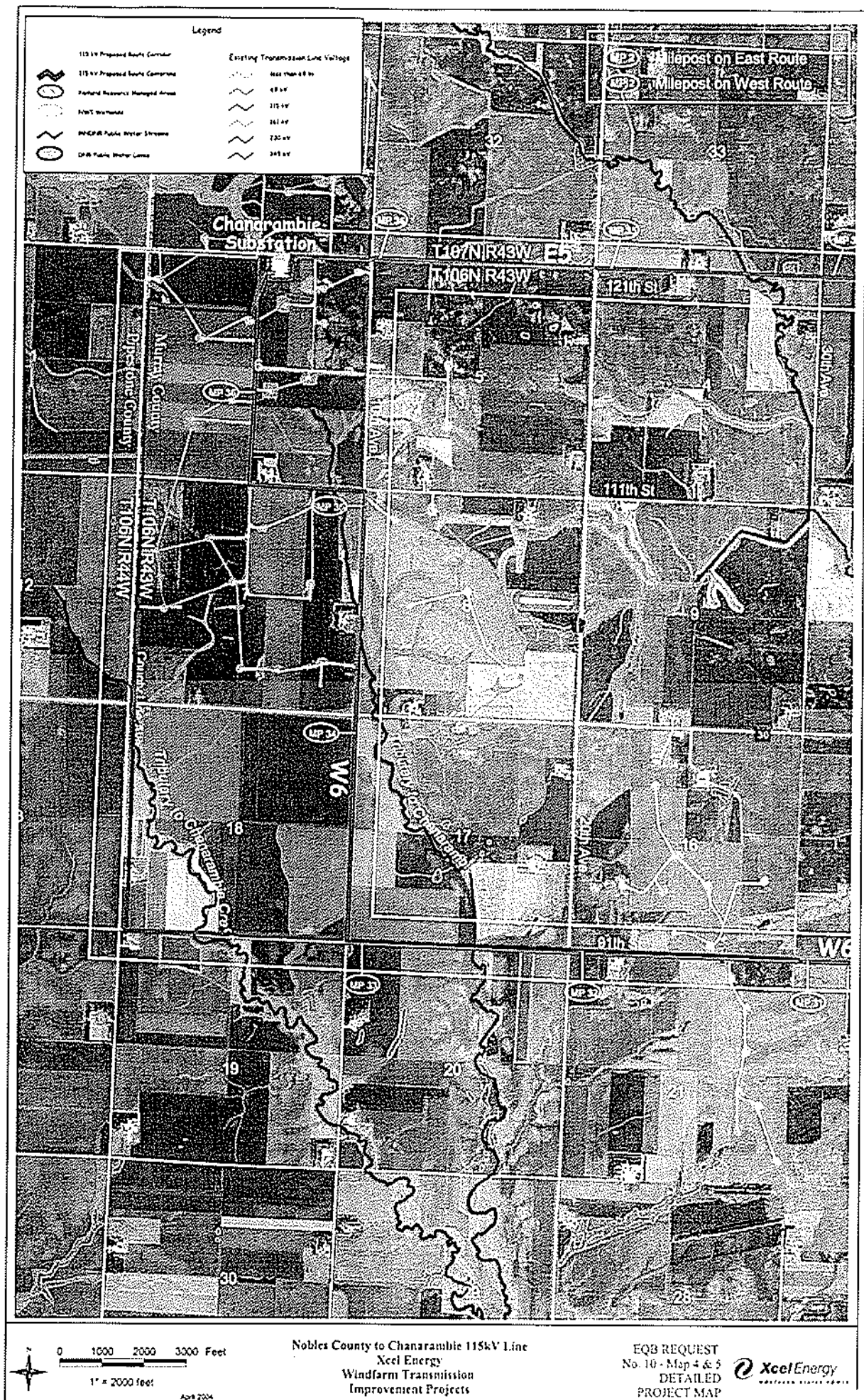


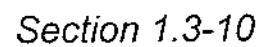


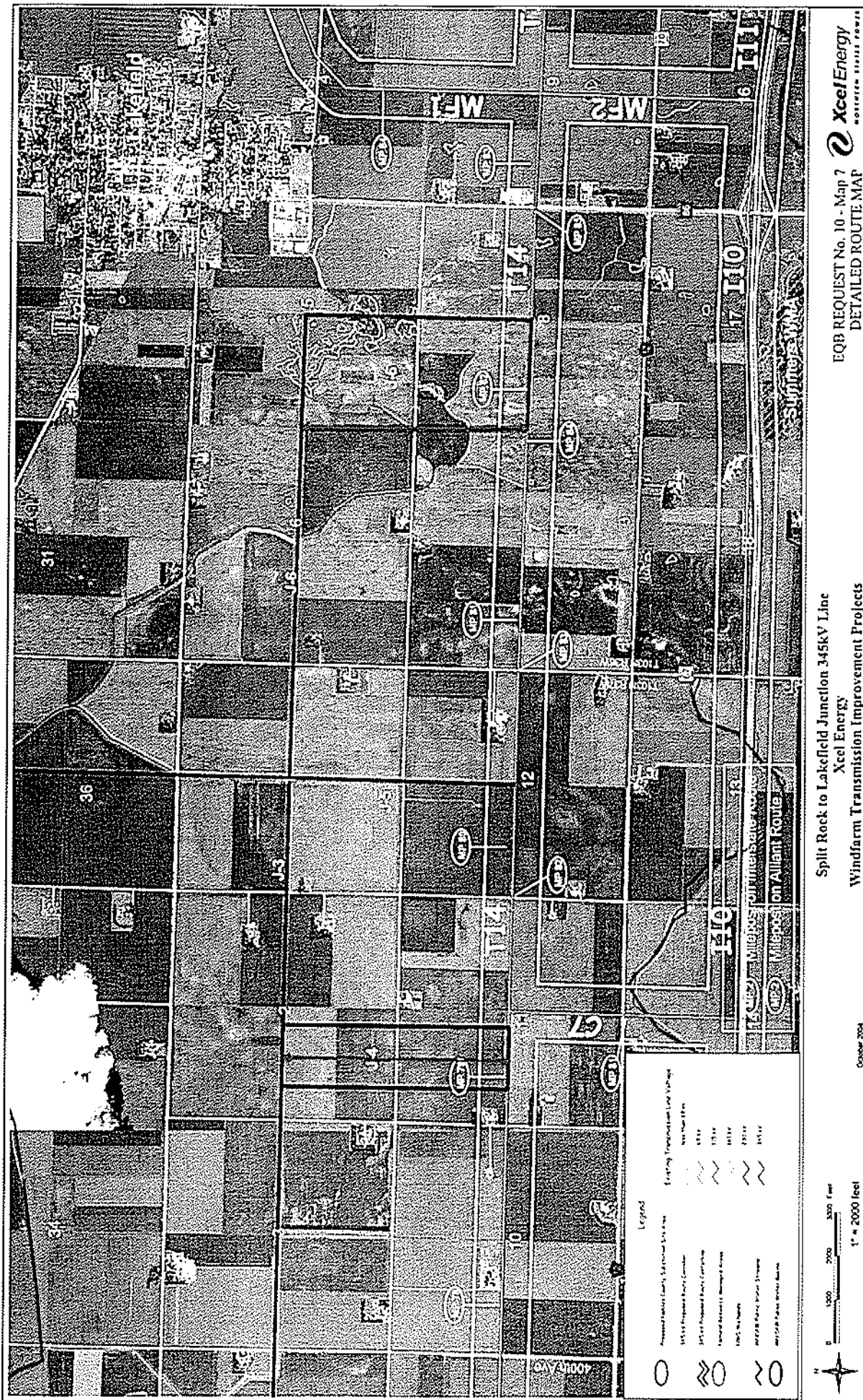
**Split Rock to Lakesfield Junction 345kV Line
Xcel Energy
Windfarm Transmission Improvement Projects**

POLYMER









Section 1. EIS Revisions and Additions

- 1.4** Xcel Energy Responses to EQB information requests 11 through 14, incorporated by reference.

Section 1.4. Xcel Energy Responses to Information Requests 11 through 14.

After the draft EIS was issued in January, 2005, Xcel Energy provided additional information regarding the feasibility of using the “Alliant” route for the proposed 345 kV line and the advisability of constructing the 115 kV line using structures capable of having a second circuit added in the future. Xcel Energy, in a February 11, 2005 response to EQB staff information requests addressed construction period reliability issues for the “Alliant Route” (request 11); post-construction reliability issues on the same route (request 12), and advisability of using double circuit capable structures on the 115 kV line (request 13). Xcel had responded earlier to Information Request 14 regarding the advisability of installing double-circuit capable structures on the 345 kV line.

Alliant Route Reliability

In summary, Xcel Energy believes there are important reliability and delay issues associated with the construction of the 345 kV line on the “Alliant Route.” These issues include an approximately 22 week period during which the City of Worthington would be at risk while served by only one transmission line into its primary substation (Elk Substation). Xcel also estimates there would be an approximately 13 month construction delay using the “Alliant Route” compared to the “I-90 Route.” Post construction reliability problems are less of a concern, although it is possible that in the future an outage on a double circuit 161/345 kV line on the Alliant Route “could become the limiting contingency with respect to local load serving capability.”

Advisability of Double Circuit Structures

Xcel Energy advises against installing structures capable of double circuiting in the future for both the 345 kV and the 115 kV lines, but for different reasons. For the 345 kV line, Xcel Energy advises against installing double-circuit structures because a second 345 kV circuit on the same corridor is so unlikely that the extra cost of the double circuit structures is not justified. For the 115 kV line, while a second 115 kV circuit is quite possible in the area in the near future, double circuiting the two lines on the same structures would not make sense because the very purpose of the second 115 kV line would be to provide a reliable, redundant circuit to the first line—should that line go down.

Detailed Analysis Available

The detailed Xcel Energy analysis of these issues is available upon request from EQB staff, or on line (<http://www.eqb.state.mn.us/Docket.html?Id=6466>). The analysis is contained not only in Xcel Energy’s response to information requests 11 through 14, but also in the profile testimony of Grant Stevenson and Walt Grivna, as well as in the hearing testimony itself.

Section 1. EIS Revisions and Additions

1.5 Outage data for Alliant 161 kV line between Split Rock to Heron Lake



System Operations Outage Tracking

Nobles Cooperative Electric

Outage Id: 1406

Line: 198 Magnolia 819 (NO-ADT, NO-RUT)

Reason: Freezing rain & windy - broken strands found on NO-RUT

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO1	Adrian	T	GA	04/15/2000 07:57	04/15/2000 09:02	65	Freezing rain & windy - broken strands found on NO-RUT
NO10	Rushmore	T	GA	04/15/2000 07:57	04/15/2000 09:58	121	Freezing rain & windy - broken strands found on NO-RUT

Outage Id: 1407

Line: 200 Elk 845 (NO-WF)

Reason: Ice, wind and galloping conditions

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12	Bloom	T	GA	04/15/2000 08:11	04/15/2000 08:11	0	Ice, wind and galloping conditions
NO5	Fulda	T	GA	04/15/2000 08:11	04/15/2000 08:55	44	Ice, wind and galloping conditions

Outage Id: 1409

Line: 199 Fulda 826 (NO-BL)

Reason: Broken crossarm found between Fulda & Bloom

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12	Bloom	T	PF	04/15/2000 17:44	04/15/2000 19:26	102	Broken crossarm found between Fulda & Bloom
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Outage Id: 1414

Line: 199 Fulda 826 (NO-BL)

Reason: Ice, wind and galloping conditions

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12	Bloom	T	GA	04/15/2000 20:49	04/15/2000 20:49	0	Ice, wind and galloping conditions
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System Operations Outage Tracking

Outage Id: 1415

Line: 254 Lake Yankton TR1 - Tracy 713

Reason: Ellsborough tap line galloping. Nobles backed the sub.

Breaker	Distance	T/D	Cause	Start	End	Duration	Notes
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO4 Ellsborough T GA 04/15/2000 21:11 04/15/2000 23:40 149 Ellsborough tap line galloping. Nobles backed the sub.

Outage Id: 1417

Line: 199 Fulda 826 (NO-BL)

Reason: Ice, wind and galloping conditions

Breaker	Distance	T/D	Cause	Start	End	Duration	Notes
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12 Bloom T GA 04/15/2000 21:22 04/15/2000 21:22 0 Ice, wind and galloping conditions

Outage Id: 1418

Line: 199 Fulda 826 (NO-BL)

Reason: Ice, wind and galloping conditions

Breaker	Distance	T/D	Cause	Start	End	Duration	Notes
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12 Bloom T GA 04/15/2000 21:50 04/15/2000 21:50 0 Ice, wind and galloping conditions

Outage Id: 1419

Line: 199 Fulda 826 (NO-BL)

Reason: Ice, wind and galloping conditions

Breaker	Distance	T/D	Cause	Start	End	Duration	Notes
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12 Bloom T GA 04/15/2000 21:52 04/15/2000 21:52 0 Ice, wind and galloping conditions

System Operations Outage Tracking

Outage Id: 1420

Line: 199 Fulda 826 (NO-BL)

Reason: Ice, wind and galloping conditions

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12	Bloom	T	GA	04/15/2000 21:56	04/15/2000 21:56	0	Ice, wind and galloping conditions
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Outage Id: 1421

Line: 199 Fulda 826 (NO-BL)

Reason: Ice, wind and galloping conditions

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12	Bloom	T	GA	04/15/2000 22:07	04/15/2000 22:07	0	Ice, wind and galloping conditions
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Outage Id: 1422

Line: 199 Fulda 826 (NO-BL)

Reason: Ice, wind and galloping conditions

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12	Bloom	T	GA	04/15/2000 22:11	04/15/2000 22:11	0	Ice, wind and galloping conditions
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Outage Id: 1423

Line: 199 Fulda 826 (NO-BL)

Reason: Ice, wind and galloping conditions

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12	Bloom	T	GA	04/15/2000 22:14	04/15/2000 22:14	0	Ice, wind and galloping conditions
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System Operations Outage Tracking

Outage Id: 1424

Line: 199 Fulda 826 (NO-BL)

Reason: Ice, wind and galloping conditions

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12	Bloom	T	GA	04/15/2000 22:21	04/15/2000 22:21	0	Ice, wind and galloping conditions
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System Operations Outage Tracking

Nobles Cooperative Electric

Outage Id: 3301

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping. Line locked out at 0544

Breaker		Distance		Fault Type				
Substation		T/D	Cause	Start	End	Duration	Notes	
NO9		Worthington	T	GA	11/27/2001 05:08	11/27/2001 05:08	0	Ice, wind and galloping. Line locked out at 0544

Outage Id: 3302

Line: 203 Magnolia 816

Reason: Ice, wind and galloping causing downed conductor, and broken crossarms

Breaker	Distance	Fault Type					
Substation	T/D	Cause	Start	End	Duration	Notes	
NO7	Lismore	T	XF	11/27/2001 05:11	11/27/2001 11:47	396	Ice, wind and galloping causing downed conductor, and broken crossarms

Outage Id: 3303

Line: 204 Heron Lake 839 - Split Rock 5X37/5X38

Reason: Ice, wind and galloping. 161 kV line between Heron Lake and Split Rock. Sectionalized between Elk and Magnolia.

Breaker	Distance	Fault Type					
Substation	T/D	Cause	Start	End	Duration	Notes	
NO1	Adrian	T	GA	11/27/2001 05:18	11/27/2001 05:39	21	Ice, wind and galloping. 161 kV line between Heron Lake and Split Rock. Sectionalized between Elk and Magnolia.
NO10	Rushmore	T	GA	11/27/2001 05:18	11/27/2001 05:39	21	Ice, wind and galloping. 161 kV line between Heron Lake and Split Rock. Sectionalized between Elk and Magnolia.
NO12	Bloom	T	GA	11/27/2001 05:18	11/27/2001 05:18	0	Ice, wind and galloping. 161 kV line between Heron Lake and Split Rock. Sectionalized between Elk and Magnolia.
NO5	Fulda	T	GA	11/27/2001 05:18	11/27/2001 05:37	19	Ice, wind and galloping. 161 kV line between Heron Lake and Split Rock. Sectionalized between Elk and Magnolia.
NO9	Worthington	T	GA	11/27/2001 05:18	11/27/2001 05:37	19	Ice, wind and galloping. 161 kV line between Heron Lake and Split Rock. Sectionalized between Elk and Magnolia.

System Operations Outage Tracking

Outage Id: 3304

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping. Line locked out at 0544

Breaker Distance Fault Type

Substation	T/D	Cause	Start	End	Duration	Notes
NO9 Worthington	T	GA	11/27/2001 05:39	11/27/2001 05:39	0	Ice, wind and galloping. Line locked out at 0544

Outage Id: 3305

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping. Line locked out at 0544

Breaker Distance Fault Type

Substation	T/D	Cause	Start	End	Duration	Notes
NO9 Worthington	T	GA	11/27/2001 05:41	11/27/2001 05:41	0	Ice, wind and galloping. Line locked out at 0544

Outage Id: 3306

Line: 204 Heron Lake 839 - Split Rock 5X37/5X38

Reason: Ice, wind and galloping. Heron Lake-Elk 161 kV line tripped. Elk CB 847 already open.

Breaker Distance Fault Type

Substation	T/D	Cause	Start	End	Duration	Notes
NO5 Fulda	T	GA	11/27/2001 05:44	11/27/2001 05:44	0	Ice, wind and galloping. Heron Lake-Elk 161 kV line tripped. Elk CB 847 already open.

Outage Id: 3307

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping. Conductor damage from galloping found near C511.

Breaker Distance Fault Type

Substation	T/D	Cause	Start	End	Duration	Notes
NO9 Worthington	T	GA	11/27/2001 05:44	11/27/2001 09:53	249	Ice, wind and galloping. Conductor damage from galloping found near C511.

System Operations Outage Tracking

Outage Id: 3308

Line: 204 Heron Lake 839 - Split Rock 5X37/5X38

Reason: Ice, wind and galloping. Heron Lake-Elk 161 kV line locked out. Fulda transferred to Heron Lake source.

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO5	Fulda	T	GA	11/27/2001 05:47	11/27/2001 06:36	49	Ice, wind and galloping. Heron Lake-Elk 161 kV line locked out. Fulda transferred to Heron Lake source.
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Outage Id: 3316

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping near switch C511

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO9	Worthington	T	GA	11/27/2001 09:57	11/27/2001 09:57	0	Ice, wind and galloping near switch C511
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Outage Id: 3317

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping near switch C511

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO9	Worthington	T	GA	11/27/2001 09:59	11/27/2001 09:59	0	Ice, wind and galloping near switch C511
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Outage Id: 3318

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping near switch C511

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO9	Worthington	T	GA	11/27/2001 10:00	11/27/2001 10:00	0	Ice, wind and galloping near switch C511
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System Operations Outage Tracking

Outage Id: 3319

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping near switch C511

Breaker: Distance Fault Type

Substation	T/D	Cause	Start	End	Duration	Notes
NO9 Worthington	T	GA	11/27/2001 10:07	11/27/2001 10:07	0	Ice, wind and galloping near switch C511

Outage Id: 3320

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping near switch C511

Breaker: Distance Fault Type

Substation	T/D	Cause	Start	End	Duration	Notes
NO9 Worthington	T	GA	11/27/2001 10:18	11/27/2001 10:18	0	Ice, wind and galloping near switch C511

Outage Id: 3321

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping near switch C511

Breaker: Distance Fault Type

Substation	T/D	Cause	Start	End	Duration	Notes
NO9 Worthington	T	GA	11/27/2001 10:20	11/27/2001 10:20	0	Ice, wind and galloping near switch C511

Outage Id: 3322

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping near switch C511

Breaker: Distance Fault Type

Substation	T/D	Cause	Start	End	Duration	Notes
NO9 Worthington	T	GA	11/27/2001 10:39	11/27/2001 10:39	0	Ice, wind and galloping near switch C511

System Operations Outage Tracking

Outage Id: 3323

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping near switch C511

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO9	Worthington	T	GA	11/27/2001 10:55	11/27/2001 10:55	0	Ice, wind and galloping near switch C511
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Outage Id: 3324

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Ice, wind and galloping near switch C511

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO9	Worthington	T	GA	11/27/2001 11:28	11/27/2001 11:28	0	Ice, wind and galloping near switch C511
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System Operations Outage Tracking

Nobles Cooperative Electric

Outage Id: 5639

Line: 201 Pipestone 4X742 - Tracy 700 (NO-CHT, NO-RC)

Reason: Ice, wind, galloping. Walnut Grove and Ellsborough were radial out of Tracy due to line construction and the Pipestone-
Chanarambire 115kV line being OOS due to galloping.

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
NO11	Lake Sarah	T	GA	12/15/2003 21:56	12/15/2003 21:56	0
NO2	Chandler	T	GA	12/15/2003 21:56	12/15/2003 21:56	0
NO3	Currie	T	GA	12/15/2003 21:56	12/15/2003 21:56	0
NO6	Lake Wilson	T	GA	12/15/2003 21:56	12/15/2003 21:56	0
NO8	Slayton	T	GA	12/15/2003 21:56	12/15/2003 21:56	0

Outage Id: 5640

Line: 202 Chanarambire 5X92/5X93 - Lake Yankton 5X14/5X15

Reason: Ice, wind, galloping. Walnut Grove and Ellsborough were radial out of Tracy due to line construction and the Pipestone-
Chanarambire 115kV line being OOS due to galloping.

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
NO4	Ellsborough	T	GA	12/15/2003 21:56	12/15/2003 21:56	0

Outage Id: 5642

Line: 201 Pipestone 4X742 - Tracy 700 (NO-CHT, NO-RC)

Reason: Ice, wind, galloping. Walnut Grove and Ellsborough were radial out of Tracy due to line construction and the Pipestone-
Chanarambire 115kV line being OOS due to galloping.

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
NO11	Lake Sarah	T	GA	12/15/2003 21:59	12/15/2003 21:59	0
NO2	Chandler	T	GA	12/15/2003 21:59	12/15/2003 21:59	0
NO3	Currie	T	GA	12/15/2003 21:59	12/15/2003 21:59	0
NO6	Lake Wilson	T	GA	12/15/2003 21:59	12/15/2003 21:59	0
NO8	Slayton	T	GA	12/15/2003 21:59	12/15/2003 21:59	0



System Operations Outage Tracking

Outage Id: 5643

Line: 202 Chanarambie 5X92/5X93 - Lake Yankton 5X14/5X15

Reason: Ice, wind, galloping. Walnut Grove and Ellsborough were radial out of Tracy due to line construction and the Pipestone-Chanarambie 115kV line being OOS due to galloping.

Breaker	Distance	Fault Type
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Substation	T/P	Cause	Start	End	Duration	Notes
NO4 Ellsborough	T	GA	12/15/2003 21:59	12/15/2003 21:59	0	

Outage Id: 5648

Line: 202 Chanarambie 5X92/5X93 - Lake Yankton 5X14/5X15

Reason: Pipestone-Chanarambie 115 kV line tripped due to galloping. Temporary 115/69 kV mobile at Lake Yankton also tripped. Ellsborough restored from mobile and served radially from Tracy 69 kV.

Breaker	Distance	Fault Type
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Substation	T/P	Cause	Start	End	Duration	Notes
NO4 Ellsborough	T	GA	12/15/2003 15:13	12/15/2003 15:26	13	

Outage Id: 5649

Line: 204 Heron Lake 839 - Split Rock 5X37/5X38

Reason: Floater found at structure #154 between Split Rock and Magnolia. Ice, wind, and galloping. Lismore served from Fulda 826 and Magnolia 69 kV load served from Sibley due to Magnolia sub construction.

Breaker	Distance	Fault Type
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Substation	T/P	Cause	Start	End	Duration	Notes
NO12 Bloom	T	CF	12/15/2003 19:05	12/15/2003 19:05	0	Fulda AS scheme operated.
NO13 Brewster	T	CF	12/15/2003 19:05	12/15/2003 19:38	33	Fulda AS scheme operated.
NO5 Fulda	T	CF	12/15/2003 19:05	12/15/2003 19:32	27	Fulda AS scheme operated.
NO7 Lismore	T	CF	12/15/2003 19:05	12/15/2003 19:05	0	Fulda AS scheme operated.
NO9 Worthington	T	CF	12/15/2003 19:05	12/15/2003 19:32	27	Fulda AS scheme operated.

System Operations Outage Tracking

Outage Id: 5650

Line: 199 Fulda 826 (NO-BL)

Reason: Heron Lake CB 831 serving the Fulda CB 826 load after the Fulda AS scheme had operated for an earlier fault on the Heron lake-Split Rock 161 kV line. Lismore served from Fulda CB 826 due to construction at Magnolia.

Breaker		Distance		Fault Type		
Substation	T/D	Cause	Start	End	Duration	Notes
NO12 Bloom	T	GA	12/15/2003 19:29	12/15/2003 19:30	1	

Outage Id: 5651

Line: 203 Magnolia 816

Reason: Heron Lake CB 831 serving the Fulda CB 826 load after the Fulda AS scheme had operated for an earlier fault on the Heron lake-Split Rock 161 kV line. Lismore served from Fulda CB 826 due to construction at Magnolia.

Breaker		Distance		Fault Type		
Substation	T/D	Cause	Start	End	Duration	Notes
NO7 Lismore	T	GA	12/15/2003 19:29	12/15/2003 19:30	1	

Outage Id: 5652

Line: 199 Fulda 826 (NO-BL)

Reason: CB 826 tripped and locked out. Lismore served from Fulda dur to construction at Magnolia. This construction prevented load being served from Magnolia until personnel could make changes. Fulda CB 826 also failed and caused single phasing.

Breaker		Distance		Fault Type			
Substation							
NO12	Bloom	T/D	Cause	Start	End	Duration	Notes
		T	EQ	12/15/2003 19:37	12/16/2003 13:00	1043	Very poor visibility. Load was restored from backfeed. Line restored at 13:45

Outage Id: 5653

Line: 203 Magnolia 816

Reason: CB 826 tripped and locked out. Lismore served from Fulda dur to construction at Magnolia. This construction prevented load being served from Magnolia until personnel could make changes. Fulda CB 826 also failed and caused single phasing.

Breaker						
Distance			Fault Type			
Substation						
T/D	Cause	Start	End	Duration	Notes	
NO7	Lismore	T	EQ	12/15/2003 19:37	12/16/2003 09:45	848
					Very poor visibility. Load was restored by backfeed. Line restored at	



System Operations Outage Tracking

Outage Id: 203

Line: 203

Reason: CB 826 tripped and locked out. Lismore served from Fulda dur to construction at Magnolia. This construction prevented load being served from Magnolia until personnel could make changes. Fulda CB 826 also failed and caused single phasing.

Substation	T/D	Cause	Start	End	Duration	Notes
						13:45

Outage Id: 5654

Line: 200 Elk 845 (NO-WF)

Reason: Fulda and Worthington were being served from Heron Lake CB 831 because the tow main breakers at Elk were open. Breaker closed by SCADA and it held. Ice, wind, and galloping.

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
NO5 Fulda	T	GA	12/15/2003 19:42	12/15/2003 19:43	1	

Outage Id: 5655

Line: 205 Elk 847 (NO-EW, NO-WO, NO-WR, NO-WT)

Reason: Fulda and Worthington were being served from Heron Lake CB 831 because the tow main breakers at Elk were open. Breaker closed by SCADA and it held. Ice, wind, and galloping.

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
NO9 Worthington	T	GA	12/15/2003 19:42	12/15/2003 19:43	1	

Outage Id: 5656

Line: 204 Heron Lake 839 - Split Rock 5X37/5X38

Reason: Circuit switcher NO13CS1 opened and locked out. CT was wired incorrectly causing differential trip. Corrected on 12/19/03.

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
NO13 Brevster	D	RF	12/15/2003 21:41	12/16/2003 04:45	424	Very poor visibility.



System Operations Outage Tracking

Nobles Cooperative Electric

Outage Id: 6422

Line: 199 Fulda 826 (NO-BL)

Reason: Ice, wind, and galloping. Blizzard conditions. Alliant reported a floater, repairs made and line returned to service.

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO12	Bloom	T	CF	01/21/2005 20:14	01/21/2005 21:20	66
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Outage Id: 6423

Line: 201 Pipestone 4X742 - Tracy 700 (NO-CHT, NO-RC)

Reason: Ice, wind, and galloping. Blizzard conditions. Line sectionalized at Slayton. Pipestone breaker could not be closed by SCADA. 23 structures down between Hadley 4X47 and Slayton 4X46.

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO11	Lake Sarah	T	PF	01/21/2005 20:18	01/21/2005 20:26	8
NO2	Chandler	T	PF	01/21/2005 20:18	01/21/2005 21:51	93
NO3	Currie	T	PF	01/21/2005 20:18	01/21/2005 20:26	8
NO6	Lake Wilson	T	PF	01/21/2005 20:18	01/21/2005 21:51	93
NO8	Slayton	T	PF	01/21/2005 20:18	01/21/2005 20:28	10

Outage Id: 6424

Line: 282 Lyon County 4N153 - Tracy 713 - Mn Valley 472

Reason: Ice, wind, and galloping. Blizzard conditions. Slayton switch 4X46 open so Lake Sarah, Currie and Slayton were served radially from Tracy.

Breaker	Distance	Fault Type
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Substation	T/D	Cause	Start	End	Duration	Notes
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NO11	Lake Sarah	T	GA	01/21/2005 20:35	01/21/2005 20:35	0
NO3	Currie	T	GA	01/21/2005 20:35	01/21/2005 20:35	0
NO8	Slayton	T	GA	01/21/2005 20:35	01/21/2005 20:35	0

System Operations Outage Tracking

Outage Id: 6425

Line: 282 Lyon County 4N153 - Tracy 713 - Mn Valley 472

Reason: Ice, wind, and galloping. Blizzard conditions. Slayton switch 4X46 open so Lake Sarah, Currie and Slayton were served radially from Tracy.

Breaker	Distance	Fault Type
Substation	T/D Cause	Start
NO11 Lake Sarah	T GA	01/21/2005 20:37
NO3 Currie	T GA	01/21/2005 20:37
NO8 Slayton	T GA	01/21/2005 20:37
		End
		01/21/2005 21:07
		01/21/2005 21:07
		01/21/2005 21:07
		Duration
		30
		30
		30
		Notes

Outage Id: 6427

Line: 204 Heron Lake 839 - Split Rock 5X37/5X38

Reason: Elk Main breakers 842 and 843 tripped when the Lakefield Jct.-Lakefield Gen 345 kV line tripped and Fox Lake CB 773 also tripped. Alliant is investigating the relay misoperation.

Breaker	Distance	Fault Type
Substation	T/D Cause	Start
NO5 Fulda	T RF	01/21/2005 21:16
NO9 Worthington	T RF	01/21/2005 21:16
		End
		01/21/2005 23:21
		01/21/2005 23:54
		Duration
		125
		158
		Notes

Outage Id: 6431

Line: 282 Lyon County 4N153 - Tracy 713 - Mn Valley 472

Reason: Ice, wind, and galloping. Blizzard conditions. Xcel had problems getting Tracy CB 713 closed. Slayton switch 4X46 was already open.

Breaker	Distance	Fault Type
Substation	T/D Cause	Start
NO11 Lake Sarah	T GA	01/21/2005 21:26
NO3 Currie	T GA	01/21/2005 21:26
NO8 Slayton	T GA	01/21/2005 21:26
		End
		01/21/2005 21:57
		01/21/2005 21:57
		01/21/2005 21:57
		Duration
		31
		31
		31
		Notes

System Operations Outage Tracking

Outage Id: 6434

Line: 282 Lyon County 4N153 - Tracy 713 - Mn Valley 472

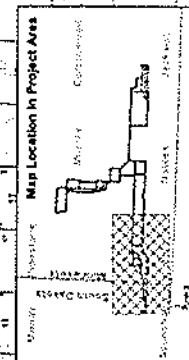
Reason: Ice, wind, and galloping. Blizzard conditions. Xcel could not get Tracy CB 713 closed. Xcel bypassed the breaker to restore Lake Sarah, Currie, and Slayton. Line already open between Tracy and Pipestone at Slayton 4X46.

Breaker	Distance		Fault type		End	Duration	Notes
NO11	Lake Sarah	T	GA	01/21/2005 23:02	01/22/2005 02:30	208	
NO3	Currie	T	GA	01/21/2005 23:02	01/22/2005 02:30	208	
NO8	Slayton	T	GA	01/21/2005 23:02	01/22/2005 02:30	208	

Section 1. EIS Revisions and Additions

1.6. Xcel Energy revised preferred routes.

Minnehaha County
Rock County

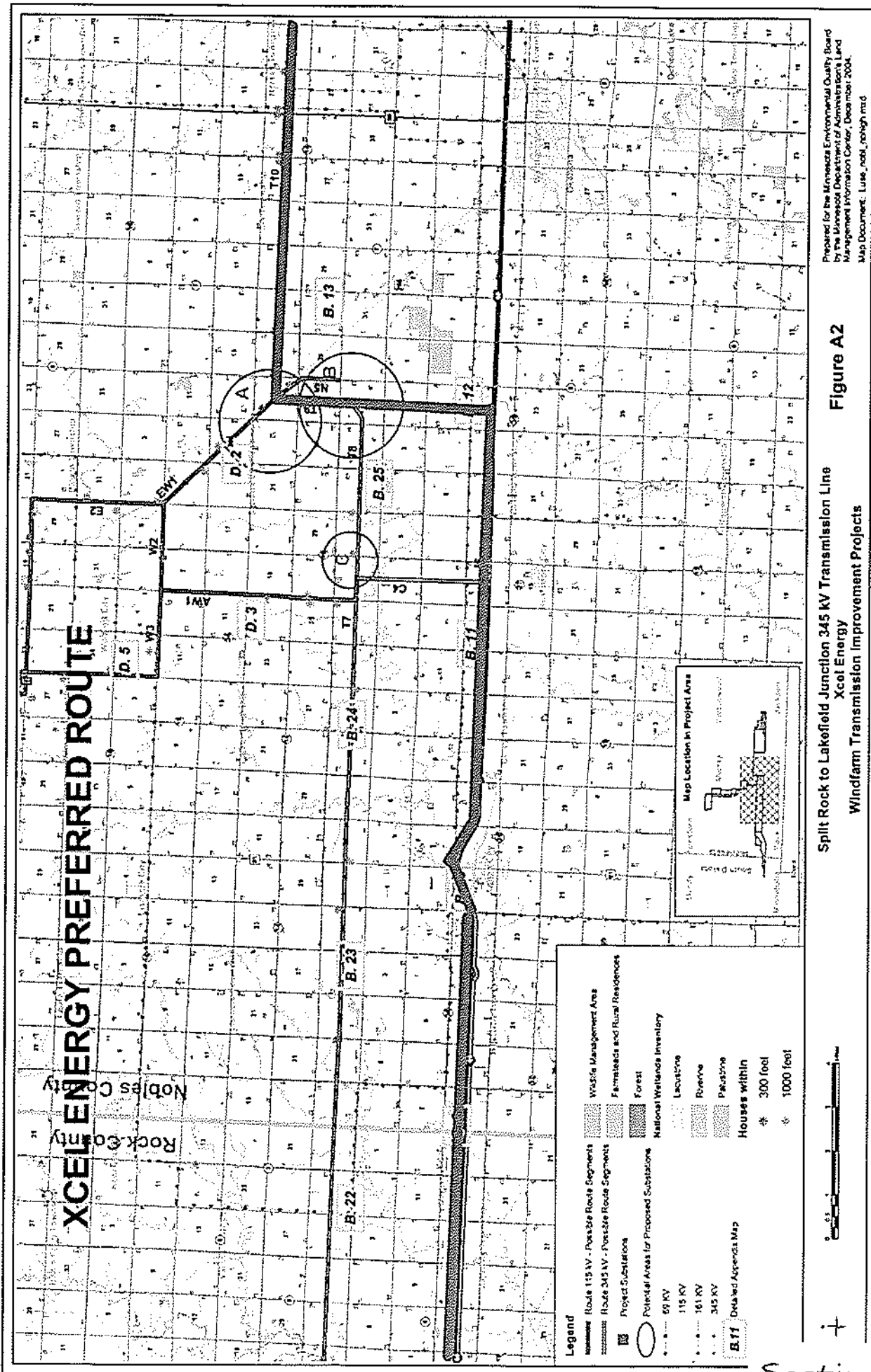


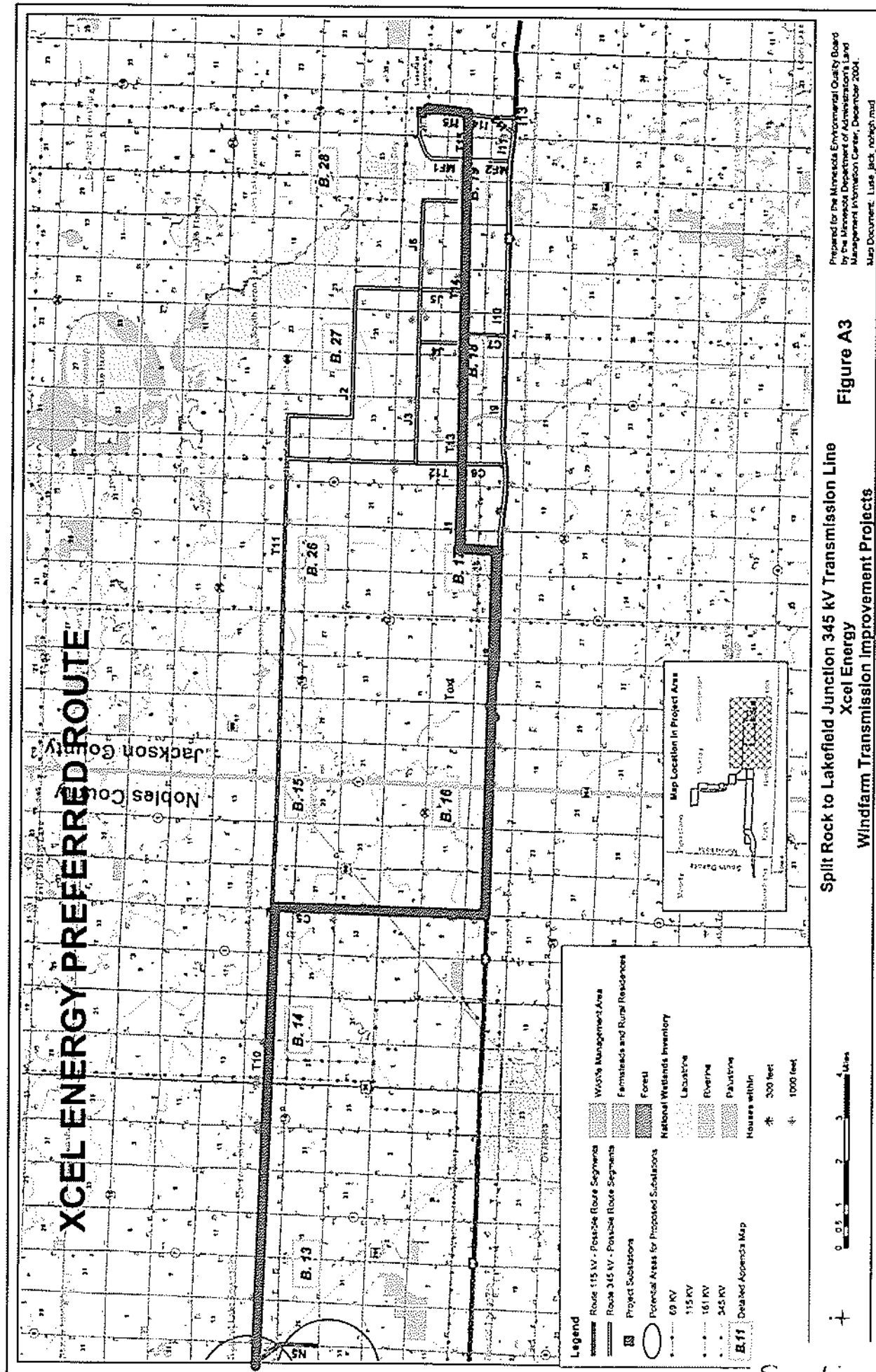
Split Rock to Lakefield Junction 345 kV Transmission Line
Xcel Energy
Windfarm Transmission Improvement Projects

Prepared for the Minnesota Environmental Quality Board
by the Minnesota Department of Administration's Land
Management Information Center, December 2004.
Map Document: Lusa_rock_north.mxd

Figure A1

Ex 1.3.9





Final Environmental Impact Statement

Section 2. Comment summaries and EQB staff responses;

This final EIS incorporates by reference the draft EIS, which is available from EQB staff or at the EQB web site:

<http://www.eqb.state.mn.us/Docket.html?id=6466>

Section 2. EQB Staff Summary and Response to Public Comments on the Draft EIS

The EQB received many written and verbal comments during the scoping period when planning the EIS during the June and July, 2004. Scoping comments and responses are part of the EIS record, and are included in the September 24, 2004 EQB Scoping Decision on the project.

The following is a summary of major comments on the draft EIS, with EQB staff responses. The comment summaries and responses are divided into the following categories:

1. Electric and Magnetic Fields;
2. Alternative Routes;
3. Stray Voltage/Radio/GPS Interference;
4. Farming Conflicts;
5. Property Values/Land Use;
6. Use of Township and County Right-of-Way (reduce farm impacts);
7. Tenant/resident notification procedures;
8. Technical EIS corrections or additions;
9. Wildlife and waterfowl concerns;
10. Grid Reliability, Double Circuit Issues, construction delay;
11. Easement/ Right-of-way/ Condemnation right concerns
12. Aesthetics

1. Electric and Magnetic Field (EMF) Comments

Many people living near a proposed route were concerned about potential health impacts from power line EMF. **Ms. Lori Henning** for example, pointed out that medical conditions in her immediate family may be related to transmission lines. She has also researched the cancer incidence in her neighborhood and mentioned a number of medical research studies which point at possible connections between EMF and human medical problems.

Others were equally concerned. **Eric Post** - Citizen is strongly concerned about potential health impacts from power line EMF of proposed lines that would run near his farm, especially for his small children. Concerns were expressed by **Bob Pauling - Mary Jane Pauling** (existing condition could come back or be made worse), **Merlin Tordsen**, **Tim Henning** – (Representing Minnesota Farmers Union, top concerns are health and safety in construction and operation of

power lines especially with regard to human and animal health issues, and suggested avoiding residences to the maximum extent possible.) Also **Harold Rutgers, Clyde Smith, and Larry Von Holtum**. Some comments maintained that minimum set backs from homes should be at least 300 feet--which is where the line's predicted magnetic field drops to approximately background levels--instead of the easement width that is currently used as minimum setback by Xcel Energy.

1. EMF Response. Section 6.2 of the draft EIS summarizes the issue. There are thousands of pages of information available on the issue, all of which leads most experts to conclude that there is no evidence of a negative health effect. Nevertheless, EQB staff would also prefer not to live next to a high-voltage transmission line if it was possible to avoid it. The EQB (as well as Xcel Energy) follows a "prudent avoidance" policy and is trying to find a route that avoids homes as much as reasonably possible.

2. Alternative Route Recommendations

Some written, and many verbal comments at the hearings, addressed which route was preferred by a particular commenter, and why. These comments are of course critical to the final route recommendation by the administrative law judge and the ultimate decision by the EQB. However, they are not directly related to the information in the Draft EIS, so they are not summarized or addressed here.

3. Stray Voltage / Animal Health Effects

Concerns over stray voltage, dairy impacts, radio and GPS interference and similar issues were raised often verbally during the hearings. Commenters included **Clyde Smith** (radio interference with farm equipment and computers from HVTL lines and towers.), and Brenda Heard (cell phone/ satellite TV concerns)

Response. According to Xcel Energy, stray voltage is largely a case by case problem associated with local distribution systems, not high-voltage transmission lines like those proposed here. Also, Xcel Energy has provided a response to electrical interference issues, that is included as an attachment to these comments and responses. In general, the letter indicates that radio interference can be a problem in some circumstances, and they are willing to work with landowners and residents to resolve individual problems as they arise.

4. Farming Conflicts

Many commenters were concerned generally with potential farming conflicts. Specific questions/ issues were raised by: **Dwaine Rossow** – Concerned that the proposed line may affect farming operations, which are in Rost section 1, 12, 13 and Hunter section 6. Some of the proposed line routes affect two sides of the farms. Mr. Rossow sold out the dairy business in about 1984 and is now considering building hog barns. One of the restrictions already in place is that the barns have to be built at least ½ mile from the building site. With the restriction on

where they can be built, the route of your proposed line and if you have restrictions also, it could make it very difficult to build and therefore would affect our business.

Robert and Teresa Fuerstenberg - Citizens own a farm in the southern one-half of Section 15 in Wilmont Township, Nobles County. One of the route options has a transmission line going through the middle of their field and perpendicular to the direction crops are farmed. This would create operational difficulties for managing this field. They are also concerned that there are a large number of known and unknown drain tile lines on this property. They suggest that proposed lines be rerouted to go along existing roads or fence lines to avoid disrupting farm activities in this parcel. They have included a copy of the route maps indicating their area of concern and a copy of the township plat map showing the area they own.

Lowell Binford; Marlin Bootsma - Concerned about (1) what happens to Alliant line if I-90 route used, and (2) the Interstate 90 route near Beaver Creek and how transmission lines are constructed to deal with highway interchanges.

Response. Hog barn setback would have to be no more than to remain clear of the 75 foot (on each side) easement for the line. For Fuerstenberg property, EQB staff understands the concern of crossing cultivated land such as on this route segment. Also, a potential route adjustment was added to route segment N.2. (FEIS figure D.6) to help avoid farming conflicts should that route segment be chosen by the EQB. Regarding the Alliant line, it would stay in place if the I-90 route is used, and (2) Xcel Energy would work with Mn/DOT and nearby landowners when doing final detailed design for highway interchanges.

5. Economic Concerns/ Property Values Comments

Jerry Brakke; Henry Engels provided map with additional information. Mr. Brakke expressed concern that one of the potential route segments would interfere with his plans to build a future home on his property. **Teresa and William Korth** - Concerned that one of the proposed routes goes along the north and east edge of their mother's farm. Wanted to know details on easement and pole spacing issues. There is an existing wind easement with GE Wind. They wanted to know how this line would affect their potential ability to develop wind turbines in the future. Without detailed answers to these questions they feel the need to oppose the route which would affect them in the Northwest one quarter of Section 15, Wilmont Township, Nobles County. They have also included copies of project maps indicating their areas of concern.

John and Ervin Renken - Does not want transmission line on north side of Highway 266 in the vicinity of Reading. One of proposed route options is within 150 feet of his home. **Tim Henning** They are also concerned that compensation for easements be adjusted to benefit landowners receive more money for placement of transmission lines on their property. **Ron Fick** - Concerned about the Interstate 90 route near Luverne exit. He has development property at this junction and is concerned the HVTL will negatively affect his ability to develop the property. Also is invested in wind power development. He asked about eminent domain procedures.

Response

a. **Jerry Brakke and Henry Engels.** The EIS maps D.5. and D.7 have been revised in the final EIS to include new items pointed out in comments. EQB staff notes that one likely route for the 115 line passes by Mr. Brakke's house, (west route), while the other passes near his home (east route.)

b. **Teresa and William Korth** - Other possible routes are under consideration; should your land get selected, Xcel would work with you and agree on exact pole placement locations. Spans can vary but are generally about 400 feet apart, but these distances can be shorter or longer to accommodate particular conditions. Transmission lines should have minimal affect on the potential siting of turbines on your properties. Setbacks would be worked out in siting of tower and line designs. Xcel staff answered that for this segment the line will follow property lines not go through middle of field.

c. **Renken's.** It is likely the route may go along Hwy. 266 past your house, Xcel would likely route it on the other side of the highway. A specific permit condition to that effect could be considered by the EQB.

6. Roadway Conflicts

Kent Slater; Nobles County Commisisoners. - Why would Xcel Energy have to put their utility poles five feet into private fields when the route is along township roads? Unlike county roads, many of these township roads are little used, often dirt, roads that are almost certainly not going to be expanded in the future to accommodate trucks or other farm machinery. So future liability for moving the poles due to roadway expansion is very seldom really an issue on township roads. So the utility should save themselves some money by avoiding paying for private easements from farmers and avoid disrupting farming operations by putting poles along township roads in the roadway right-of-way instead of into farmer's fields. **Steven Schneider - Randy Groves**, county engineers (Nobles and Murray) addressed county concerns with utility construction and potential for future conflicts.

Response. County Highway Engineers were less concerned about liability issues than during scoping process. Major concern was whether Xcel Energy could use pole foundations in hilly locations where grading may be required in the future. Xcel Energy agreed to cooperate with County in determining structure placement at critical road crossings. (Possible permit condition). Regarding township roads, it may be possible to put utility poles within township right-of-way if safety clear zones are adequate. Whether safety zones would allow it would have to be determined on a case by case basis. The county highway engineers testifying at the hearings seemed to believe, as does Xcel Energy that it is better to place large high-voltage transmission line poles at least five feet into private fields than in township roadway right of way.

7. Landowner/Tenant Notification Comments

Bob Pauling - Concerned that he as a long-term tenant was not directly notified of process.

Response: While not legally required, EQB staff agrees this notice should be done, and intends to require and serve notice on tenants in future projects.

8. Technical Corrections or Clarifications in Documents and/or Maps Comments

Pam Rasmussen, Xcel Energy – Suggested changes to draft EIS table 1. **Response.** Table 1 has been revised in the Final EIS.

Jerry Brakke - Citizen provides some recent construction information that will require map revisions to account for pre-existing structure which has been removed. **Response:** The map in Appendix D5 and D7 has been revised to reflect the comments.

9. Wildlife/Waterfowl/Habitat Comments

MN DNR has concerns with waterfowl migration and structure collisions. DNR staff (in general), confirmed at the hearing that it prefers Xcel Energy route as modified and proposed at hearing. Other commenters suggested that the “west” route in Murray county near the Chandler WMA was far enough from the waterfowl wetland areas in that WMA that bird collisions were unlikely.

10. Grid Reliability/Construction Schedule Comments

Reliability concerns during construction of Alliant route and related construction delays were addressed by the following utility employees: **Grant Stevenson, Xcel Energy** - **Walt Grivna, Xcel Energy** – (regarding advisability of double circuit structures on 115 kV line). **Donald Habicht** - (Stressed the importance of reliable electrical service to Worthington industries. Mentioned cost of past outage events on major industries.) **Brian Zavesky, Missouri River** - **Jennifer Moore/ Ken Leier** - Stressed the importance of reliable electrical service to all Alliant Energy customers. **Carol Overland** - Had a number of technical questions on reliability and procedural issues. **William Head, MISO** - Explained the role of MISO and their involvement with issues of transmission system reliability. **Mike Steckelberg, GRE** - Stressed the importance of reliable electrical service to all Great River Energy customers. **Tim Henning (Farmer’s Union)**- Expressed concerns about power reliability if line was double-circuited.

Response. Xcel Energy reliability analysis is included in Final EIS, (Section 1), incorporated by reference. FEIS Section 1 also includes outage data for the existing 161-kV line provided by Great River Energy. EQB staff’s only (non-expert) additional response is that the outage data appears to indicate that reliability problems created by galloping of old conductors that might need replacing may at least as big a problem as that created by single contingencies during construction of a double circuit line along the “Alliant Route.”

11. Easement/Right of Way/Eminent Domain Authority.

Lori Henning; John Nauerth; Carol Overland; Tom Voehl; Luke Henning; Tim Henning, Jim Jones Jr.; Tom Soderholm; Michael Groen, and many others challenged whether utility compensation and use of eminent domain was fair. Ms. Henning questioned the wisdom of allowing Xcel the right of eminent domain when they were a for profit company and also mention draft legislation by Senator Vickerman affecting land-owner payments for utility easements.

Jim Jones Jr. - Concerned about liability insurance requirements if transmission structures were placed on his property. He also wanted to know about easement compensation and reimbursement for any lost government payment programs he might otherwise be eligible for if structures were not there. Suggested that wind tower owners provide financial compensation to landowners impacted by transmission lines. Suggested increasing utility rates to compensate landowners along proposed transmission lines. He also mentioned concerns about impact on local township roads.

g. **Tom Soderholm** - Concerned about double-circuiting of power lines near town of Reading and long-term expansion plans if wind power continues to grows in the region at the same pace it has been. Concerned about minimizing the need for use of new right of way to the maximum extent possible. He was also interested in technical details of transmission towers and lines and land owner compensation for easements.

Response.

Although outside the scope of both the EIS and the EQB routing authority, EQB staff included this issue in this summary because it was probably the most comment received during the entire project. At the hearings, Ms. Agrimonti, Briggs and Morgan attorney for Xcel Energy explained the legal aspects of the easement and compensation procedures used by Xcel in dealing with transmission lines. Ms. Rasmussen, Xcel staff, explained right-of-way procedures used by Xcel. Judge Klein often pointed out that the only way to really deal with the issue may be at the legislature, where there are bills pending.

12. Aesthetics

a. **Lori Henning** - Citizen is concerned about impacts of proposed lines that would run near her "Century" Farm. **Horace Thompson** - Citizen owns 120 acres of land along Alliant route Option B, including about 30 acres of CRP land. He is concerned that transmission line construction would interfere with the farmability of his property, future development possibilities, resale value, quality for wildlife habitat and aesthetics. **Eric Post** - Citizen is concerned about potential aesthetic effects of proposed lines that would run near his farm. **Geri Albers**, in earlier comments, said an I-90 route would be both unnecessary and ruin views from the freeway. **Jeanne Van Balen** - She also mentioned general issues on economic, agricultural and historic

impacts of potential HVTL s. **Clyde Smith** - He asked about construction details of transmission towers and lines.

Response. The issue of aesthetics is addressed in the draft EIS, so no additional information was added to Final EIS. Along I-90, the 120 foot tall poles would be very visible and change the view. The higher poles would also be more visible than the existing "h-frame" poles along the Alliant route.

Final Environmental Impact Statement

Section 3. Comments on the Draft EIS, including comments received during EIS scoping period and summary of EIS comments at formal contested case hearings.

This final EIS incorporates by reference the draft EIS, which is available from EQB staff or at the EQB web site:

<http://www.eqb.state.mn.us/Docket.html?Id=6466>

Section 3

Comment on Draft EIS

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Xcel Energy DEIS Comment

John,

Northern States Power Company d/b/a Xcel Energy provided several points of clarification on the draft Environmental Impact Statement in the prefiled Direct Testimony of Pamela J. Rasmussen at page 3, lines 15-27 and in Exhibit PR-1 attached to the testimony. Xcel Energy requests that the MEQB accept this portion of Ms. Rasmussen's testimony and Exhibit PR-1 as comments to the draft Environmental Statement.

Please call me if you have any questions.

Lisa M. Agrimonti
2200 IDS Center
Minneapolis, MN 55402
phone: (612) 977-8656
fax: (612) 977-8650

This is applicable section of Xcel Energy Pre-file Testimony:

Q: Do you have any clarifications you would like to make regarding the Draft Environmental Impact Statement (DEIS)?

Yes. I have several clarifications. Table 1 of the DEIS provides information regarding the right of way required for each of the routes for the 345 kV line and the 115 kV line. That chart lists only the new right of way required and does not identify the amount of existing right of way that will be utilized for the lines. The total right of way required is shown on the Revised Table 1 in Exhibit PR-1.

In addition, Appendix E of the DEIS includes Xcel Energy's Data Request Responses to the MEQB staff, but it does not include all of the Company's responses to data requests. Some of the maps for Request Number 10 were not included. Also, subsequent to the issuance of the DEIS, Xcel Energy provided responses for Requests 11 through 14. Xcel Energy will make these responses available at the hearings scheduled for March 1 through March 4, 2005.

Table 1 - Revised
Summary Comparison of Selected Alternative Routes

Route Option	Length	Transmission ROW (miles)	Roadway ROW (miles)	Percent Shared	Total NEW ROW Required (Acres)	Total ROW Required (Acres)	Houses <300'	Houses <1000'	# of WMA and WPA w/in 2 miles	# of PWI Waters Crossed	Corners	Costs
345 kV Routes												
1-90	88.0	19.4	65.4	96.4%	692	1046	5	57	12	28	27	\$51,189,117
Alliant	85.7	67.6	6.7	86.7%	272	1502	12	30	11	23	25	\$58,320,072
#54	88.5	24.6	55.2	90.1%	694	1142	4	47	17	23	23	\$52,476,941
1-90 w/Option A (Jackson Co.) Modified 1-90 Route	88.0	18.4	62.4	91.8%	736	1071	5	56	13	24	28	\$51,024,950
Alliant w/Option B (Jackson Co.)	85.2	69.8	8.7	92.1%	207	1476	10	26	11	27	23	\$58,549,163
Alliant w/Option C (Jackson Co.)	84.7	69.8	6.7	90.3%	215	1484	11	33	12	24	21	\$58,283,755
1-90 Using Crossover C-4 and J1	86.1	22.3	54.9	89.6%	695	1101	4	56	13	23	29	\$50,643,815
1-90 Using Crossover C-4 only	86.1	23.3	59.9	96.6%	634	1058	4	57	12	27	29	\$50,807,982
115 kV Routes												
West	36.1	13.0	29.2	80.7%	139	241	11	12	8	12	16	\$15,548,680
East	36.6	0.0	35.6	97.4%	192	192	18	16	18	12	12	\$13,417,520
Example East Option B	36.6	0.0	34.6	94.6%	205	205	15	17	15	13	14	\$13,417,520
Example East Option C	37.1	8.5	35.6	97.3%	153	227	12	16	24	11	14	\$15,114,010
Example West A from Sub C	36.0	13.5	30.1	86.2%	132	239	10	12	8	12	17	\$15,603,150
Example West A from Sub A	36.5	13.0	31.2	85.3%	135	237	12	11	9	12	21	\$15,695,480
Modified East Route+AA	36.1	7.0	33.1	91.8%	163	229	13	13	12	13	11	\$14,462,490



February 24, 2005

Mr. John Wachtler
Environmental Quality Board
3rd Floor Centennial Building
658 Cedar Street
St. Paul, Minnesota 55155

RE: Alliant Energy, d/b/a Interstate Power and Light Company
Comments on the Draft EIS – Docket No. 03-73-TR-XCEL

Dear Mr. Wachtler:

Alliant Energy, d/b/a Interstate Power and Light Company, appreciates the opportunity to comment regarding the routing issues for the proposed Xcel 345 kV line between the Lakefield and Split Rock substations.

Alliant Energy recognizes the value of the considering of double circuit construction on parts of lines due to reduced right-of-way needs and therefore less impact on property owners. In the case in question, double circuit construction of the existing 161kV and the new 345 kV lines on the same poles or towers must be analyzed with the possibility that a tower could fail. This type of outage will take out both lines and must be studied to ensure that cascading of the transmission system does not occur and that load can be served. While Alliant Energy has not seen the studies that were performed to analyze the affect of double circuit versus single circuit of these facilities, Alliant Energy, does, as a general matter, agree with Xcel's assessment that double circuit construction will not allow for the full transfer capability benefit that should occur with the construction of this 345kV facility.

In addition to the loss of transfer capability, Alliant Energy also has concerns with the double circuiting from a reliability standpoint. Alliant Energy's concerns stem from having to take the existing 161kV line out of service during the construction process. Although, the Alliant Energy system is designed to sustain the loss of any single facility (i.e. opening any of the 161 kV sections of line between Lakefield and Split Rock during construction), the proposed construction could impact the system's reliability. For example, an additional outage on the system during a construction outage of the 161kV

Interstate Power and Light Co.
An Alliant Energy Company

Corporate Headquarters
Alliant Tower
200 First Street SE
P.O. Box 351
Cedar Rapids, IA 52406-0351

Office: 1.800.822.4348
www.alliantenergy.com

could put load at risk. This load is primarily Alliant Energy and Great River Energy customer load.

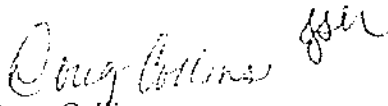
If the new Xcel 345 kV line is built completely on separate right-of-way so that there is no double circuiting with the 161 kV line at any point, then the following concerns are resolved:

- A) there are no load serving concerns during construction, and
- B) there are no double circuit outage concerns due to a single tower failure and therefore full benefit of the investment is achieved.

Alliant Energy also has concerns with another potential double circuit scenario discussed by Xcel, mainly the Lakefield – Triboji 161kV line. There is additional load that would be at risk during the outage for double circuit construction if there is a simultaneous outage of certain other facilities. This is mostly Alliant Energy load, but also includes some Corn Belt Power, MidAmerican and Ameren load. Additionally, Alliant Energy could experience significant under-voltage in Iowa on the underlying 69 kV system tied to the Triboji 161 kV substation for these simultaneous outages.

If you have any questions, please do not hesitate to contact me.

Very truly yours,


Doug Collins
Director – System Planning

STATE OF MINNESOTA
BEFORE THE ENVIRONMENTAL QUALITY BOARD

In the matter of Xcel Energy's Application
to the Minnesota Environmental Quality Board
for Route Permits for the Split Rock Substation
to Nobles County Substation to Lakefield Junction
Substation 345 kV Transmission Line and the
Nobles County Substation to Chanarambic Substation
115 kV Transmission Line and the Nobles County Substation

Docket No.: 03-73-TR-XCEL

TESTIMONY OF
DONALD HABICHT
WORTHINGTON PUBLIC UTILITIES

Introduction

My name is Donald Habicht. I am employed as General Manager for Worthington Public Utilities, 318 Ninth Street, P.O. Box 458, Worthington, Minnesota. I have a Bachelor's Degree in Agriculture from South Dakota State University and a Master's degree in Business Administration from Minnesota State University (Mankato).

I have 24 years experience as General Manager with Worthington Public Utilities and report to the Water and Light Commission. The Water and Light Commission is a policy board consisting of five members appointed by the Mayor and the Worthington City Council. I am responsible for all activities of Worthington Public Utilities consisting of the Electric, Water and Wastewater Departments. I also have been actively involved in the electric industry during my career. I serve on the board of directors of Missouri River Energy Services, I am president of Western Minnesota Municipal Power Agency, and am a member of the Midwest Electric Consumers Association.

Reason for testimony

I am here today to explain that the identified routes have a significant impact on Worthington Public Utilities (WPU), and the citizens and businesses of Worthington, and to urge the Minnesota Environmental Quality Board (EQB) to select the I-90/Modified Interstate Route to minimize the adverse impacts on the service to the 11,300 citizens of Worthington. I am providing this testimony on behalf of Worthington Public Utilities (WPU). The purpose of my testimony is to highlight the impacts on service reliability, particularly the fact that the existing backup (loop-feed) sources to those loads will be taken out of service during extended periods for construction of the new Xcel Energy 345 kV transmission line from Lakefield Junction to Split Rock. The length of time, and therefore the associated risk to the reliability of the service to the loads, will depend on which route is selected by the Minnesota Environmental Quality Board (EQB).

Existing transmission to WPU load

WPU is a member of Missouri River Energy Services (MRES). I have worked closely with the transmission planners at MRES over the years to obtain adequate and reliable transmission service. I have recently worked with Brian Zavesky of MRES in analyzing the impact of these proposed Xcel

Energy transmission lines on the city. WPU takes service from the 69 kV network which is supported directly from the Elk Substation. There are varying periods of time during the construction of the new Xcel Energy 345 kV transmission line from Lakefield Junction to Split Rock that the Elk Substation will be out of service or on a radial feed from the 161 kV Alliant Energy transmission line serving the substation. When the Elk Substation is out of service or on a radial feed, WPU is at greater risk for transmission-related power outages. Furthermore, the 69 kV system has inadequate voltage support without a tie to the Elk Substation.

Available information indicates that the Alliant Route will put the Elk Substation on a radial feed for 22 weeks versus the I-90/Modified Interstate Route which would reduce that to six weeks. Both scenarios increase the possibility of a transmission-related power outage in Worthington, but the exposure will be greatly reduced with the I-90/Modified Interstate Route.

Economic impact of transmission-related power outages

The city of Worthington and its customers are exposed to significant financial costs when an unplanned transmission outage occurs. For example, a transmission-related power outage occurred in Worthington the evening of January 21, 2005 because of a failure on Alliant Energy's 161 kV transmission system. The duration of the outage was approximately 1½ hours for Worthington's Number One Substation and 3 hours for Worthington's Number Two Substation, both of which are normally served from the Elk Substation. Approximately 30 minutes into the outage WPU was able to restore a portion of its customer load from a 14 MW diesel generation plant. However, any outage, even if it is of a short duration, has a severe economic impact on virtually all of Worthington's major businesses.

One example of the financial impact on local businesses during the January 21 outage, is the economic impact on a large pork processing plant:

- 850 production workers were idled with emergency lighting only;
- \$35,000 in lost labor costs;
- 2 hours of downtime to restore boiler temperatures;
- Product loss of hogs that could not be processed;
- Idle inventory of \$2.5 million in hogs and significantly more than that in boxed product;
- Lost gross margin on 2,000 hogs.

In another instance, a 15-minute power outage on the same transmission line on August 3, 2004 caused a similar economic impact to the pork processing plant, as well as to other major Worthington businesses.

(continued . . .)

WPU'S recommendation

WPU fully supports the construction of the Xcel Energy 345 kV transmission line from Split Rock to Lakefield Junction because it will give WPU options to improve transmission reliability. However, WPU recommends that the EQB approve the I-90/Modified Interstate Route for the following reasons:

- The amount of time that load is at high risk is significantly less: 6 weeks versus 22 weeks;
- The project will cost less if this route is selected;
- It will be built faster, thus improving reliability more quickly; and
- It will reduce the adverse economic impact on Worthington residents and businesses

Worthington Public Utilities supports the I-90/Modified Interstate Route and urges the Environmental Quality Board to select this route.

Comments by Tim Henning
President, Nobles County Farmers Union
To: Administrative Judge Allan W. Klein
March 2nd, 2005

Your Honor, my name is Tim Henning and I am a livestock and grain farmer near Lismore, Minnesota in Nobles County. I also serve as President of the Nobles County Farmers Union.

Speaking on behalf of the Minnesota Farmers Union, we are very supportive of wind and other renewable energy projects, and many of our members are directly involved in the development of many of these exciting projects.

We at MFU would like to raise concerns that we are hearing from a number of farmers and landowners in the area.

Safety is our foremost concern. MFU believes that every effort must be made to insure the health and safety in the construction and operation of the power lines. Keeping the power lines as far away from homes and farmyards must be a top priority to insure that long-term health risks are minimized.

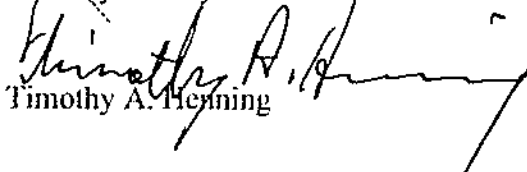
Environmentally the power lines need to be constructed in a manner to protect wildlife and agricultural properties. Construction of power lines through the middle of fields is not acceptable to MFU for the fact that maintenance would continually destroy crops and make it more difficult to farm around.

MFU is deeply concerned about the capacity of the 115kw line. Our information shows that at the time of completion of this project, wind towers will meet or exceed the 115kv capacity of the proposed line leaving no room for growth for additional wind energy development. The development of renewable energy is vital to our nations long-term best interest.

The issue of proper compensation for the acquiring of property easements for transmission lines is very important to the proposed projects. In general, landowners are offered a onetime payment for the purchase of these easements; MFU would like to explore the possibility of farmers being compensated annually for these easements. Project owners, such as the ones owning say a wind turbine will be getting compensated on a regular basis, while a landowner gets a onetime payment, but has to work around the lines the rest of our lives. Landowners must be compensated fairly for there land. MFU would also propose that the landowner have a say in selecting the appraiser to make the land evaluation.

While we are testifying in person today, MFU does request that this written testimony also be included with your consideration.

Thank-you for your time.


Timothy A. Henning

STATE OF MINNESOTA
BEFORE THE ENVIRONMENTAL QUALITY BOARD

In the matter of Xcel Energy's Application
to the Minnesota Environmental Quality Board
for Route Permits for the Split Rock Substation
to Nobles County Substation to Lakefield Junction
Substation 345 kV Transmission Line and the
Nobles County Substation to Chanarambie Substation
115 kV Transmission Line and the Nobles County Substation

Docket No.: 03-73-TR-XCEL

TESTIMONY OF
BRIAN ZAVESKY
MISSOURI RIVER ENERGY SERVICES

Introduction

My name is Brian Zavesky. I am employed as a Senior Transmission Engineer at Missouri River Energy Services (MRES), 3724 West Avera Drive, Sioux Falls, South Dakota. I have a Bachelor of Electrical Engineering degree from South Dakota School of Mines and Technology. I have five years of experience in planning of electrical transmission systems with a total of 11 years experience in the electric industry. My present job responsibilities include analysis of the electric transmission needs for the MRES municipal utility member loads in 58 communities in Iowa, Minnesota, North Dakota and South Dakota. I also serve on the Northern Mid-Continent Area Power Pool (MAPP) Sub-regional planning group, the Midwest Independent Transmission System Operator (MISO) Planning Subcommittee, and the MISO Expansion Planning Group.

Reason for testimony

I am here today to explain that the identified routes have a significant impact on MRES members and to urge the Minnesota Environmental Quality Board (EQB) to select the I-90/Modified Interstate Route to minimize the adverse impacts on the service to Minnesota citizens. I am providing this testimony on behalf of MRES municipal utility member loads whose service reliability may be affected by the line route that is chosen by the EQB. The current service provided with the system intact is looped service. Looped service will allow an unplanned outage of one path on the loop to allow power to be delivered to the load without service interruption. If the service provided is not looped, an unplanned outage may cause the load service to be interrupted or go black. The extent of this threat to reliability can be significantly affected by the choice of proposed routes. In addition, economic impacts – both in terms of the cost of energy during the construction period and the potential adverse impacts of an unplanned outage also pose a serious threat to MRES member communities.

Existing transmission to MRES member loads

Five MRES members take service from the Xcel/Alliant 161kV lines and will be impacted by the construction of the 345kV line from Splitrock substation to Lakefield substation. Those members are Adrian Public Utilities, Jackson Municipal Utilities, Lakefield Public Utilities, Westbrook Public Utilities, and Worthington Public Utilities. These five communities serve a combined population of

16,400 Minnesotans. The load described here is fed from the 69kV system which is supported by the 161 kV line at the Elk Substation, Magnolia Substation and Heron Lake Substation.

Reliability impact of route selection on MRES loads

I have followed the development and planning of this line as part of my professional responsibilities at MRES. I am familiar with the identified route along the Interstate 90 corridor (I-90 Route), as well as the alternative route that more closely follows the Alliant Energy system (Alliant Route). I am also familiar with the recent development of what is described as the Modified Interstate Route. I have reviewed the prefiled testimony of Xcel Energy/Pamela Rasmussen, and am familiar with the Xcel analysis of the various impacts of the identified routes.

The choice of route will significantly affect the service reliability to MRES loads served by the existing Alliant 161 kV transmission line. If the Alliant Route is selected the loads would be served from single transmission for extended periods of time (80 weeks) and result in much longer exposure to lengthy service outages in the event of an unplanned transmission outage (due to weather, accident, etc.). In the I-90/Modified Interstate Route alternative, the amount of time that loads are on radial transmission is significantly less at 18 weeks. While 18 weeks (over four months) is still a significant amount of time, it pales by comparison to the risk to which MRES members will be exposed by an 80 week period – in excess of a year-and-a-half.

Reliability impact of route selection on MRES loads

There are also significant economic impacts that all load in the area will be exposed to as a function of the MISO Day 2 Markets. The ability of MRES to serve its load from our resources will be significantly impaired during the construction of the Splitrock to Lakefield 161kV line. This will force MRES to rely on generation supplied by the market, which will be approximately 5% higher in cost than if we were able to serve the load from our own generation sources. The longer the outage of the Splitrock to Lakefield 161kV line, the greater the financial impacts to the serve the load in this area. Plainly, the financial risk associated with the 18-week period of time for the I-90/Modified Interstate Route is substantially less than that of the the 80-week period for the Alliant Route. As indicated in the prefiled testimony of Pamela Rasmussen of Xcel, the I-90/Modified Interstate route would reduce the economic exposure based on the reduced time period that the line would be out of service.

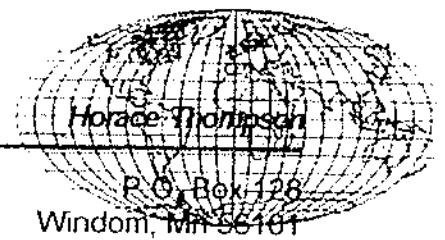
MRES recommendation

MRES recommends that the EQB approve the I-90/Modified Interstate Route for the following reasons:

- The amount of time that load is at risk is significantly less; 18 weeks versus 80 weeks;
- The cost of the route is estimated to be \$7 million less;
- The I-90/Modified Interstate Route can be completed 13 months faster;
- There will be much less financial impact on the load in the area in the MISO Markets; and
- The route will result in less adverse land use impact in terms of proximity to residential homes, interference with agricultural operations, and reduction in needed rights-of-way acquisition.

MRES supports the I-90/Modified Interstate Route and urges the Environmental Quality Board to select this route.

Wednesday, February 23, 2005



Allan Klein
Administrative Law Judge
Office of Administrative Hearings
100 Washington Square
Suite 1700
Minneapolis, MN 55401-2138
(612) 341-7609

RE: Comments on proposed 345 kV transmission-line, alternate route, in Jackson Co.

I am owner of 120 acres in S33-T103-R37. This land lies adjacent to line J2, being considered as an option for the Alliant Option B Route.

Of this property approximately 30 acres is in CRP with approximately 78 acres cultivated. This CRP ground and the adjoining County ditch are understood to be very rich habitat for song-birds, waterfowl and local wildlife. The construction of the transmission line on this route would likely diminish these qualities and aesthetics.

I also have concerns this route would make upon the farmability of the land, its future development prospects and the resale value.

I wish that the route ultimately decided upon will take these factors into consideration and will take a route which diminishes these effects upon landowners' property.

Sincerely,

Horace Thompson

Cc:
John N. Wachtler
Environmental Quality Board
3rd Floor Centennial Building
658 Cedar Street
Saint Paul, MN 55155
email: john.wachtler@state.mn.us

tel 507 831 2808
cell 651 269 9872

Laumede@earthlink.net
<http://members.tripod.com/Laumede>



COMMENT ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

Xcel Energy Split Rock 345/115 kV Line
Formal Comments on the draft EIS Due by February 22, 2005
www.eqb.state.mn.us

Your comments will become part of the formal record. The following questions are just a guide.

- Is there information in the draft EIS that you're concerned about?
- Do you think the draft EIS addresses the most important issues?
- Any other comments? For example, thinking ahead to the formal hearings, which route or substation site do you think is the best option? Why?

WE ARE CONCERNED ABOUT THE PROPOSED
ROUTING OF THE CHANARAMBIE TO NOBLES COUNTY
LINE, IF BUILT, WOULD HAVE A NEGATIVE AFFECT
IN THE YEARS AHEAD ON THE VALUE OF THE FARM
LAND THAT WE OWN IN SECTIONS 23 AND 15 OF
SUMMIT LAKE TOWNSHIP OF NOBLES COUNTY.
AND ALSO THE HOMESTEAD IN SECTION 23 IS NEXT
TO THE HIGHWAY 266 RIGHT OF WAY.
WE WOULD PREFER AN ALTERNATE ROUTE.

THE HOUSE ON THE HOMESTEAD IN SECTION 23 IS
ABOUT 130 FEET FROM THE ROAD RIGHT OF WAY.

(OPTIONAL)

Name: ERVIN RENKEN

Address 25280 STATE HWY 266
READING, MN. 56165

Potential route crosses your land?

Please provide county, township, section NOBLES CO. - SUMMIT LAKE - 23 AND 15

Use back of the page (or additional sheets) if you need more room.

Please turn in tonight or mail by February 22, 2005 to:

John Wachtler or George Johnson
MEQB Energy Facility Permitting
658 Cedar Street, 300 Centennial Building
Saint Paul, Minnesota 55155
John.wachtler@state.mn.us or george.johnson@state.mn.us



COMMENT ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

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Your comments will become part of the formal record. The following questions are just a guide.

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- Do you think the draft EIS addresses the most important issues?
- Any other comments? For example, thinking ahead to the formal hearings, which route or substation site do you think is the best option? Why?

- Concerned about the health implications of having transmission lines running past our home.
- How would transmission lines effect my opportunities of developing a wind farm in the same location.

(OPTIONAL)

Name: Lori Henning

Address 80273 390th Ave. Lakefield, MN 56150

Potential route crosses your land? Yes. One to the west + one to the north.

Please provide county, township, section Jackson, Rost, Sect 8

Use back of the page (or additional sheets) if you need more room.

Please turn in tonight or mail by February 22, 2005 to:

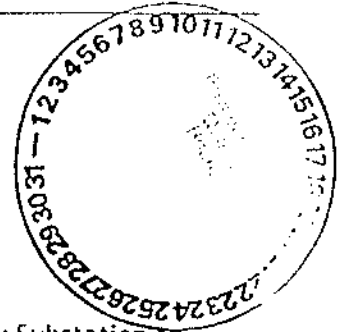
John Wachtler or George Johnson
MEQB Energy Facility Permitting
658 Cedar Street, 300 Centennial Building
Saint Paul, Minnesota 55155
John.wachtler@state.mn.us or george.johnson@state.mn.us

Rural Minnesota Energy Board

2401 Broadway Ave	Jack Keers,	Chair	Lyon	Pipestone
Suite 1	Brian Kleischer,	Vice Chair	Cottonwood	Redwood
Stacyton, MN 56177	Ken Houme,	Secretary	Faribault	Renville
507/836 8547	Larry Hansen,	Treasurer	Jackson	Rock
			Lincoln	Watsonwan
			Nobles	

February 10, 2005

Judge Allan W. Klein (ALJ)
Office of Administrative Hearings
100 Washington Square, suite 1700
Minneapolis, MN 55401-2138



Re: Docket No.: 03-73-TR-XCEL - Split Rock Substation to Nobles County Substation to
Lakefield Junction Substation 345 kV Transmission Line and the Nobles County Substation
to Chanarambie Substation, 115 kV Transmission Line and the Nobles County Substation

To the Honorable Judge Klein:

The Rural Minnesota Energy Board is seeking to intervene in this proceeding.

The Rural Minnesota Energy Board is a Joint Powers of fourteen counties in southern Minnesota; formed to provide policy guidance on issues surrounding energy development in rural Minnesota. Originally formed in 1996 as the Ridge Counties Task Force, it developed into the Wind Task Force, SW Minnesota Energy Task Force, and Rural Minnesota Energy Task Force; as both the membership and policy issues expanded. The initial focus on wind energy has broadened to include renewable energy and transmission issues. In January 2004, the process to become a more formal entity through the formation of the Joint Powers Board was initiated, and the first joint powers' meeting was held in January 2005. The counties have been active in working together to resolve many energy related issues, including the barriers to local wind energy generation and development.

The Rural Minnesota Energy Task Force (now the Rural Minnesota Energy Board) was an Intervener in the Xcel Energy Application to the Public Utilities Commission; the Task Force was successful in support of increased transmission outlet capacity that would also allow local access to the transmission grid.

Thank you for your consideration.

Sincerely,

Jack Keers, Chair
Rural Minnesota Energy Board

Cc: Pamela J. Rasmussen, Xcel Energy
George Johnson, EQB

Re: Docket No.: 03-73-TR-XCEL - Split Rock Substation to Nobles County Substation to Lakefield Junction Substation 345 kV Transmission Line and the Nobles County Substation to Chanarambie Substation, 115 kV Transmission Line and the Nobles County Substation

Community Wind South is seeking to intervene in this proceeding.

The Public Utilities Commission has approved and is siting new transmission lines which will carry electrical power from wind farms in southwest Minnesota to the major metropolitan markets such as the twin cities. For the first time the benefits of community owned wind were recognized. Our project is able to precede because of the Commission rulings.

Sincerely

rely
(Jared) Benson

Cc: Pamela J. Rasmussen, Xcel Energy
George Johnson, EQB



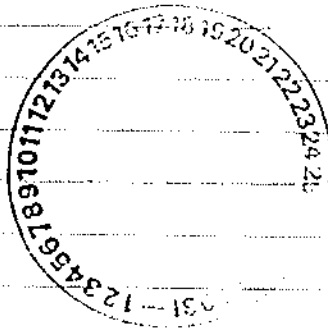
COMMENT ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

Xcel Energy Split Rock 345/115 kV Line
Formal Comments on the draft EIS Due by February 22, 2005
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- Is there information in the draft EIS that you're concerned about?
- Do you think the draft EIS addresses the most important issues?
- Any other comments? For example, thinking ahead to the formal hearings, which route or substation site do you think is the best option? Why?

(Comment) I do not want no high line on the north
side of Hwy 266 $\frac{3}{4}$ of a mile north west of Reading
it be to close to my house ~~its~~ only some
~~where~~ where 130 feet from road right way



(OPTIONAL)

Name: John R. Renken

Address: 26218 State Hwy 266 Reading Minn. 56165

Potential route crosses your land?

Please provide county, township, section Nobles, Summit Lake, 23

Use back of the page (or additional sheets) if you need more room.

Please turn in tonight or mail by February 22, 2005 to:

John Wachter or George Johnson
MEQB Energy Facility Permitting
658 Cedar Street, 300 Centennial Building
Saint Paul, Minnesota 55155
John.wachter@state.mn.us or george.johnson@state.mn.us

February 21, 2005

To: Administrative Law Judge Allan Klein
Office of Administrative Hearings
100 Washington Square, Suite 1700
Minneapolis, MN 55401-2138

Subject: Proposed transmission line by Xcel energy across Helen White Trust property in
the W½SE¼ of Section 10-102-36, Hunter Township, Jackson County

From: George Bodley
Executor of The Helen White Trust

I have some concerns about the proposed transmission line by Xcel Energy across our
farm property. The line is identified as Section I-14.

We already have a transmission line crossing this eighty-acre farm. A second line would
make farming more complicated unless the addition lines are carried by the existing
towers. Therefore, if the line must cross our property, I'm requesting that all lines be
installed on one electrical line tower.

George R. Bodley
Executor, Helen White Trust.

CC: Environmental Quality Board



Feb 18, 2005

To Whom it may concern

We would like to respond to the Nobles County Chanaarambie 115 KV line Excel Energy Windfarm Transmission Improvement Project

We are concerned with the proposed route of your line as it covers my mother's farm in the north and east. The legal description of that tract is North West Quarter Section 15 Wilmont Township Nobles County.

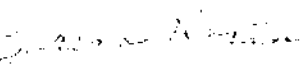
I know that this is a necessary project and don't wish to impede progress, but with the possibilities of two sides of this farm being hit, I would like to make our concerns known.

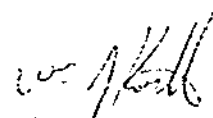
- 1) Our tile drainage runs to the north and east, thus tower placement is extremely important.
- 2) How far into the fields do the towers sit? Is the easement on the east going to be on both our property and the neighbors or solely on ours? We think some of these questions should have been answered before the comment period closes.
- 3) There is an outstanding contract with General Electric Wind Corp for potential turbine sites. How will your line affect the possibility of siting turbines on our property? If we can no longer have turbine sites or reducing the number of possible sites, we feel there is an added element of damage.

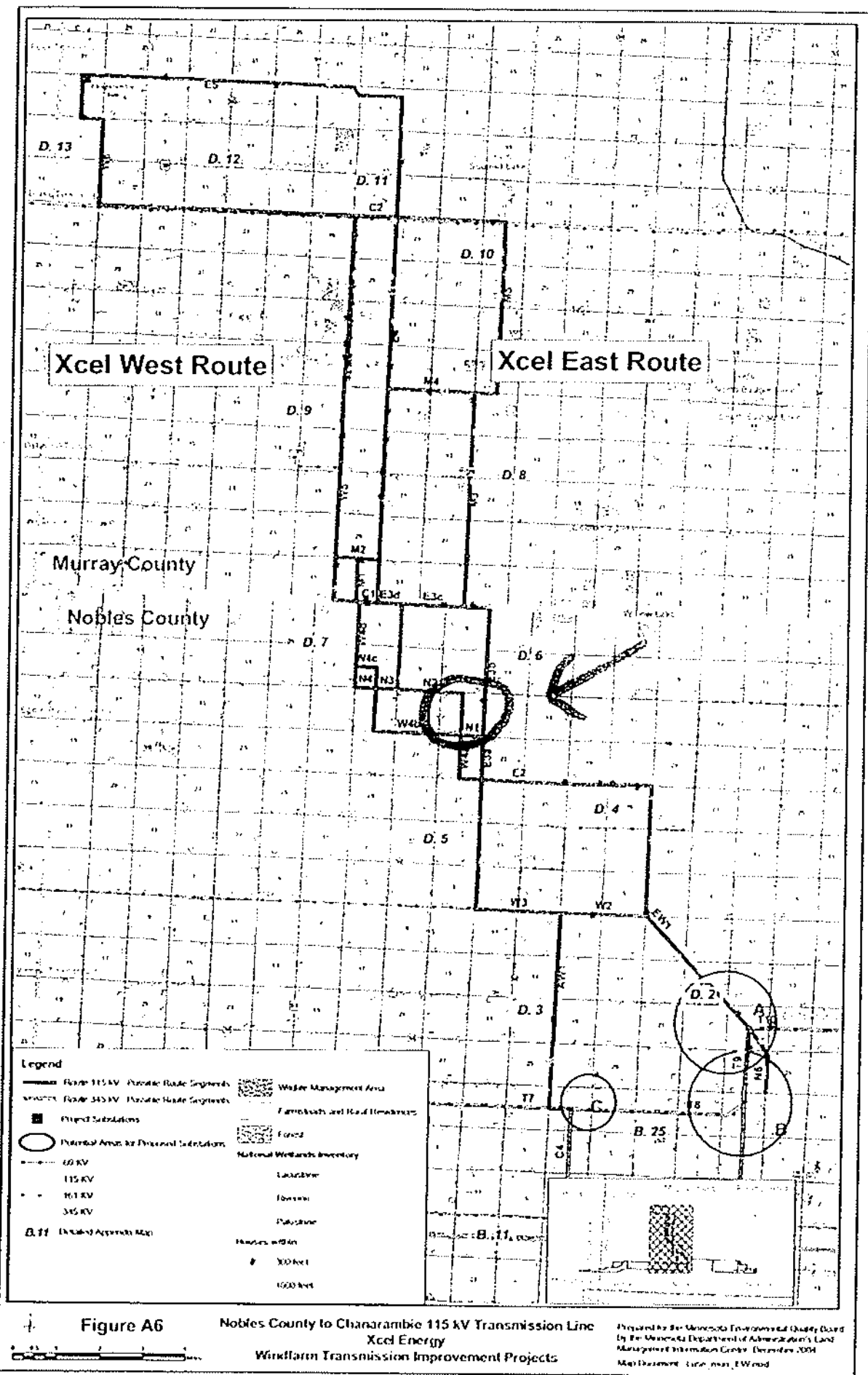
As a result of these issues, we are concerned about the routing of your line. We will certainly make every attempt to be good neighbors to you but we really feel some of these questions should be answered prior to the closing of the comment period. Since we don't know these answers, we would have to state we are opposed to the current route around our property

Enclosed you will find a map of this project with our farm outlined.

Respectfully yours,


Teresa Korth
Owner


William Korth
Tennant



THIS IS A COPY OF LETTER PREVIOUSLY SENT

JUNE 15, 2009

GEORGE JOHNSON
ENVIRONMENTAL QUALITY BOARD
300 CENTENNIAL BLDG.
658 CEDAR ST.
ST. PAUL, MN 55155

DEAR MR. JOHNSON

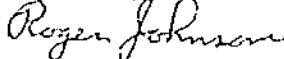
AS A CONCERNED TAXPAYER AND ELECTRIC USER, I AM
SUBMITTING A SIMPLER CONNECTION FROM CHANARAMBIE
SUBSTATION. THIS WOULD ELIMINATE FIVE (5) BRACINGS
AND BYPASS ALL TOWNS FOLLOWING HIGHWAY 91.

AMEREN UE POWER COMPANY HAS SEPARATE TRANSMISSION
LINES TO PREVENT SABATOGUE. THIS IS A CONCERN AND WILL NOT GO
AWAY.

SHORTER LINES WOULD DECREASE POWER LOSS. THE COST FACTOR
WOULD BE CUT IN HALF AND DISTURB LESS PROPERTY. WHAT
HAS READING AREA GO TO DO WITH THE END USAGE.

I HAD A HOME CONVERATION WITH PAM RASMUSSEN OF EXCEL
ENERGY ON THIS SUBJECT IN MAY 2003.

SINCERELY



ROGER JOHNSON
3228 MAUS ROAD
FULTS, IL 62244
618-458-7128

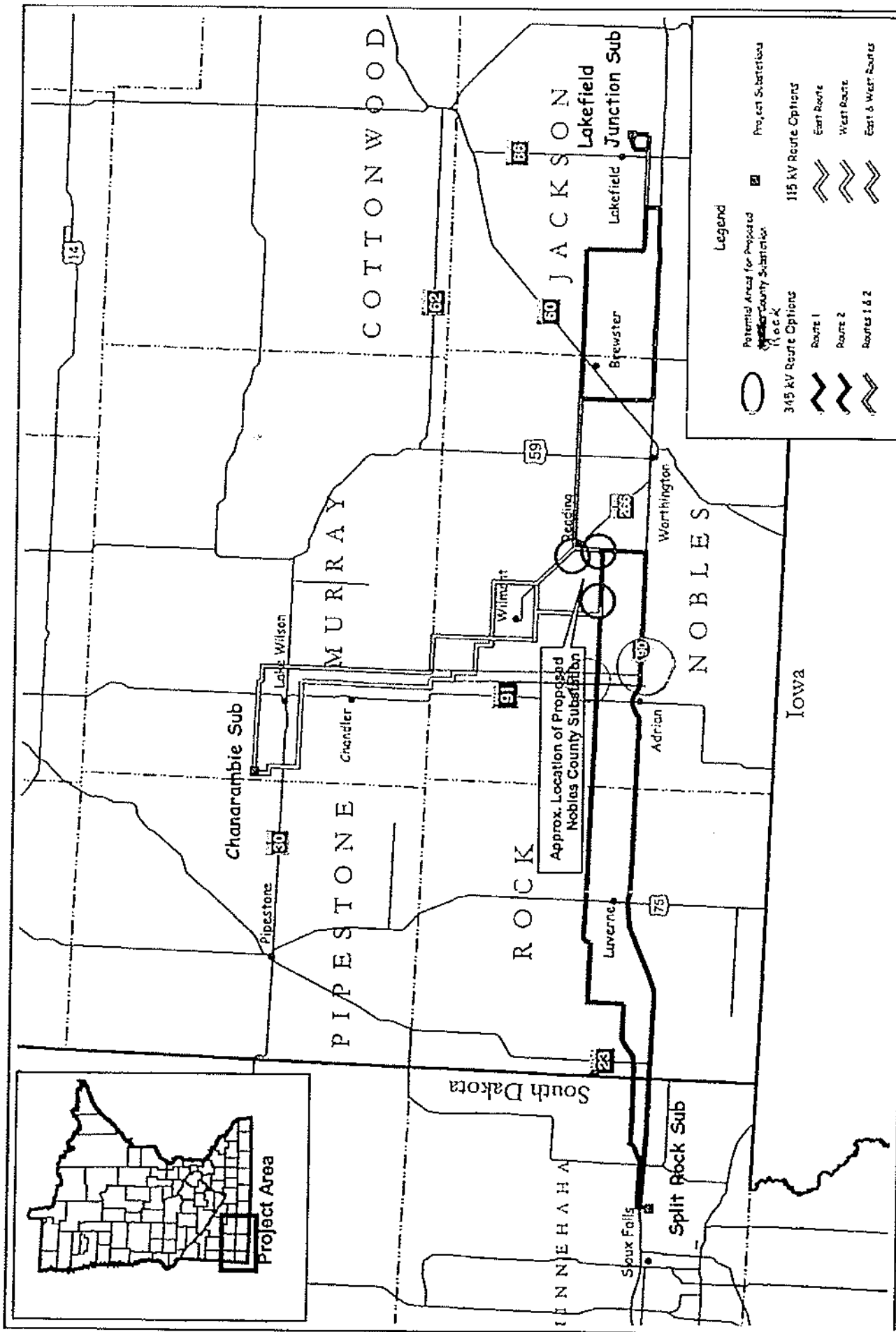


EXHIBIT A

PROJECT

OVERVIEW MAP

XcelEnergy

NORTHERN STATES POWER

MEQB DOCKET

NO. 03-73-TR-XCEL

Split Rock to Lakefield Junction 345kV Line

Nobles County to Chanarambie 115kV Line

Xcel Energy

Windfarm Transmission Improvement Projects

Scale: 0 9 18 Miles

1" = 9 Miles

April 2004



COMMENT ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

Xcel Energy Split Rock 345/115 kV Line
Formal Comments on the draft EIS Due by February
www.eqb.state.mn.us

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- Is there information in the draft EIS that you're concerned about?
- Do you think the draft EIS addresses the most important issues?
- Any other comments? For example, thinking ahead to the formal hearings, which route or substation site do you think is the best option? Why?

To John Wachtler and George Johnson

My name is Dwaine Rossow, and I am writing on behalf of Clarence Rossow and Son. My concerns on this proposal are that the proposed line may affect our farming plans.

Our farms are in Rost section 1-12-13 and Hunter section 6. Some of the proposed line routes affect 2 sides of our farms. We also have the existing line, and we have reason to believe that it affected our grade A Dairy operation in the 1970's and 1980's. We sold out the dairy business in about 1984.

We are now talking about building hog barns. One of the restrictions already in place, is that the barns have to be built at least 1/2 mile from the building site. With this restriction on where they can be built, the route of your proposed line, and if you have restrictions also, it could make it very difficult to build and therefore would affect our business. Therefore I am very concerned about the affect of this line on our ability to make a living.

My address is Dwaine Rossow

~~80603 430th Ave.~~

(OPTIONAL) Lakefield, Mn. 56150

Name: _____

E-mail: dwayne@frontiernet.net

Address

Note: pictures of our operations in 1970 and 1980:

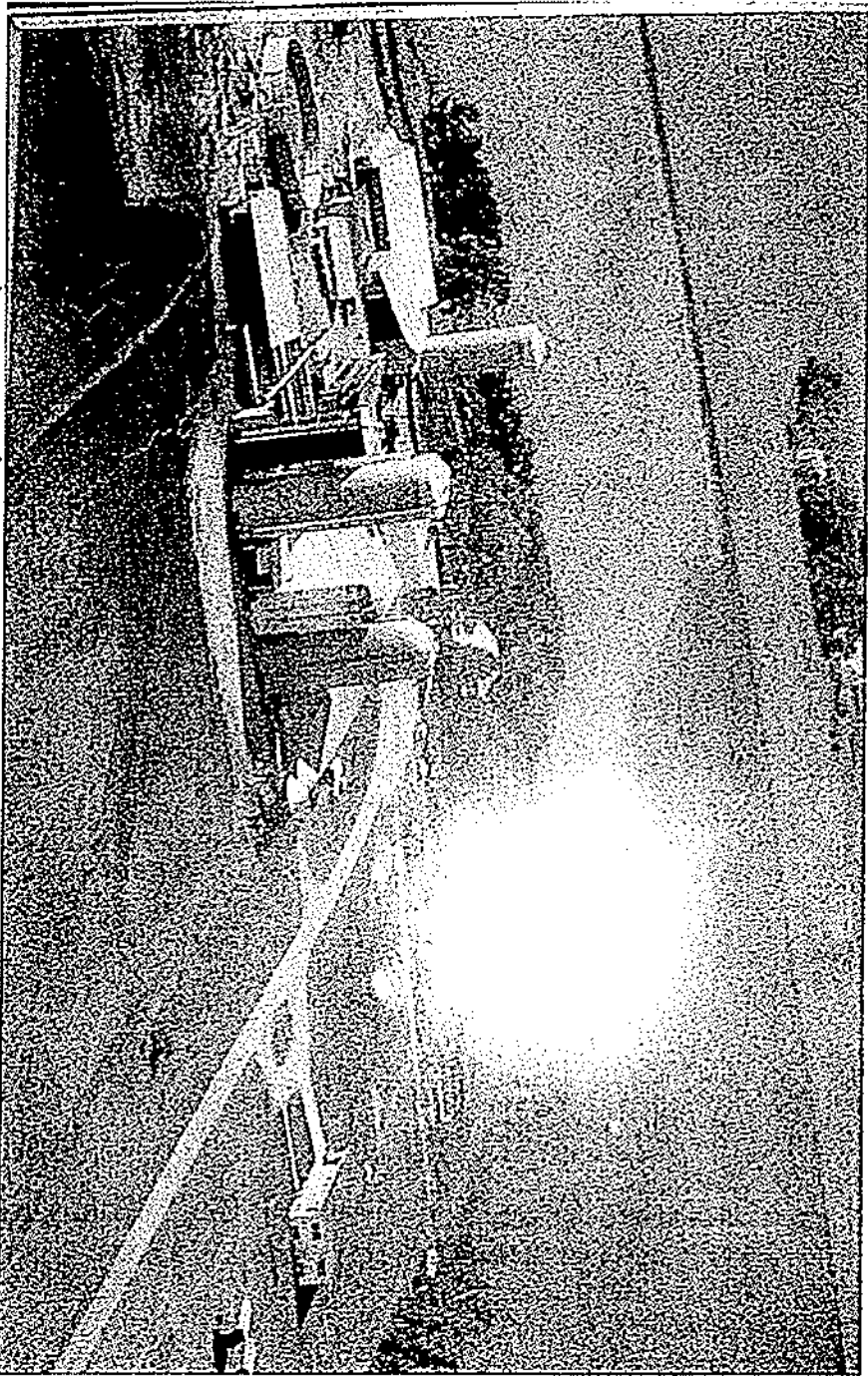
Leanne Roscoe

Potential route crosses your land?
Thank you for this opportunity to express concerns.
Please provide county, township, section

Use back of the page (or additional sheets) if you need more room.

Please turn in tonight or mail by February 22, 2005 to:

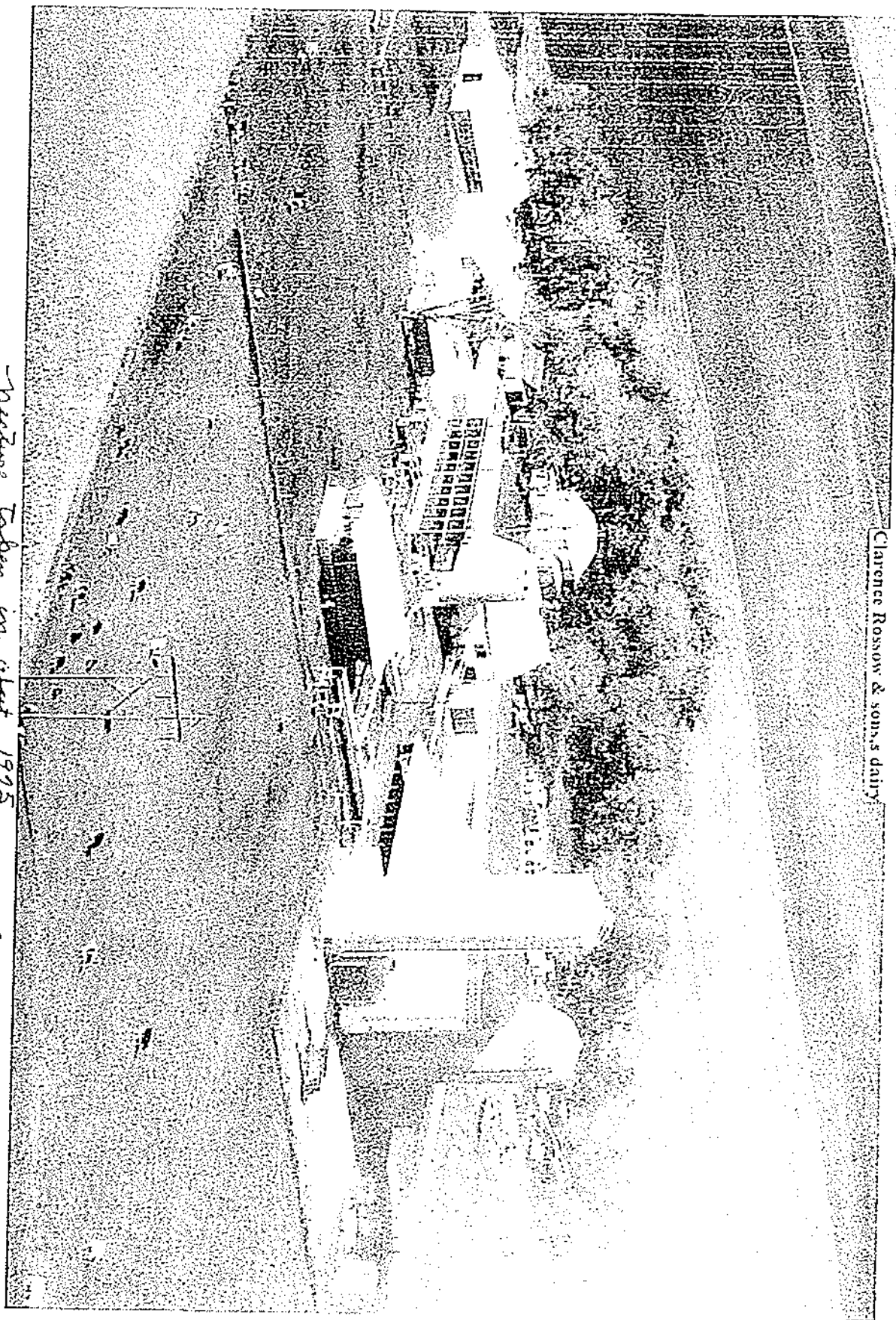
John Wachter or George Johnson
MEQB Energy Facility Permitting
658 Cedar Street, 300 Centennial Building
Saint Paul, Minnesota 55155
John.wachter@state.mn.us or george.johnson@state.mn.us



Picture taken about 1985. Notice improvements
Now stands empty - because of high cellmate cell counts.
Good possibly because of stray voltage.

Marine Reserve

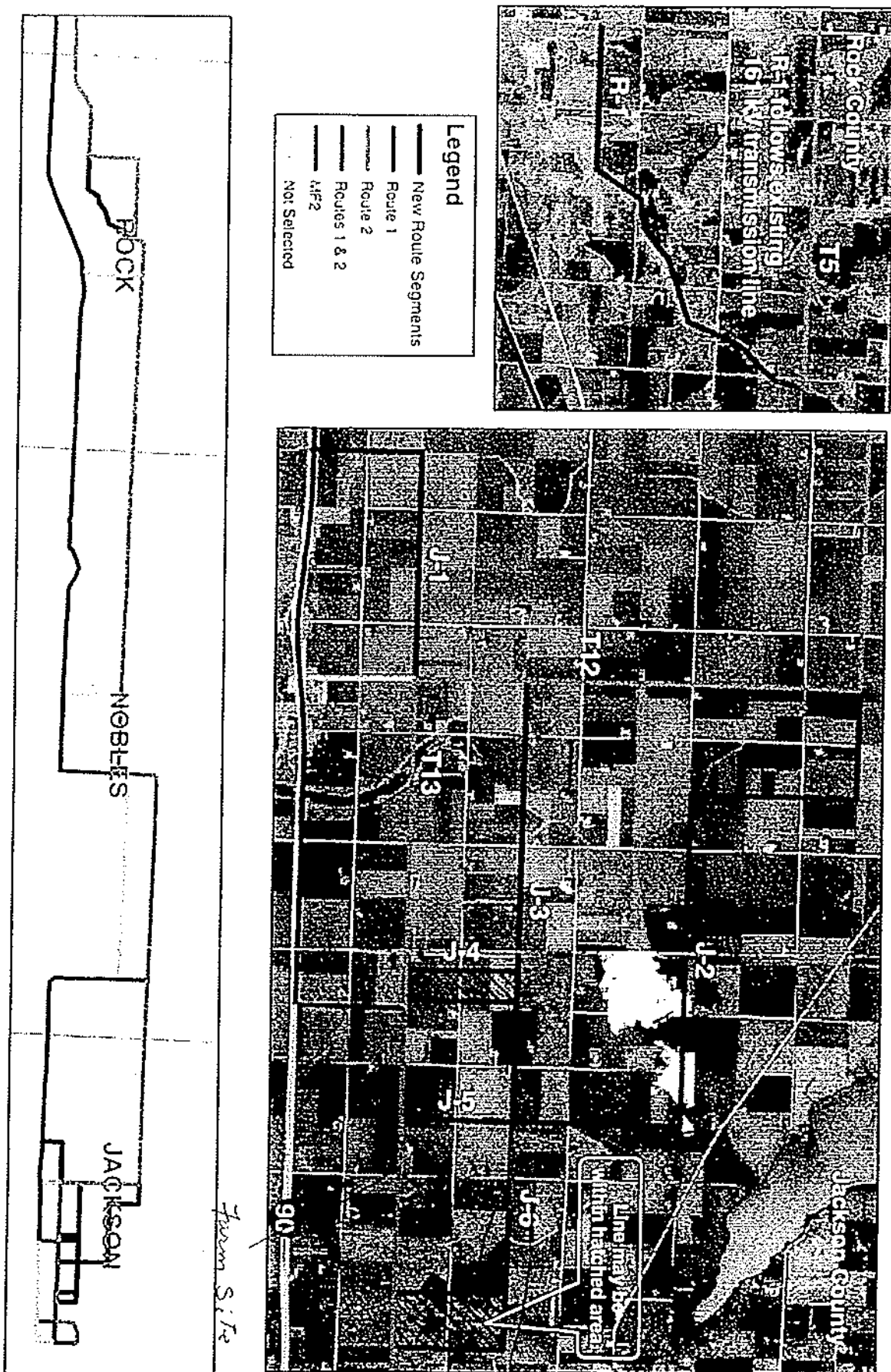
Clarence Rosow & sons dairy



prairie taken in about 1975
Clarence Rosow

Spitt Rock to Lakefield Junction 345 KV line
Xcel Energy Windfarm Transmission Improvement Projects

Figure 1





Minnesota Department of Natural Resources

500 Lafayette Road
St. Paul, Minnesota 55155-4025

February 22, 2005

Honorable Judge Allan W. Klein
Office of Administrative Hearings
100 Washington Square, Suite 1700
Minneapolis, MN 55401-2138

RE: Xcel Energy 345kV Transmission Line from Split Rock Substation to Nobles County Substation to Lakefield Junction Substation and the 115kV Transmission Line from Nobles County Substation to Chanarambie Substation and the Nobles County Substation.
Draft Environmental Impact Statement
Docket #03-73-TR-XCEL

Dear Judge Klein:

The Department of Natural Resources (DNR) has reviewed the Draft Environmental Impact Statement (DEIS) for Xcel Energy's proposed High Voltage Transmission Lines (HVTL) and new substations in Rock, Nobles, Murray and Jackson Counties. With respect to the accuracy and completeness of the DEIS, the potential impacts to natural resources, and in accordance with Minnesota Statutes §116C.57 subd.2c, the DNR offers the following comments.

1) Section 3.6: Environmental Impact Statement (p.23)

DNR has reviewed the DEIS and finds the document accurate and complete in regards to the EIS Scoping Process (Section 3.4) and the Public Comments During the Scoping Process (Section 3.5).

2) Section 4.2: 345kV Route Alternatives – Preferred Route 1: I-90 Route (p.32)

DNR supports Xcel Energy's preferred alignment for the 345kV HVTL along Interstate 90. Of the alternatives, Xcel's preferred alignment will have the fewest natural resource impacts.

3) Section 4.4: 115kV Route Alternatives – Preferred Route 1: The East Route (p.40)

DNR supports Xcel Energy's preferred alignment for the 115kV HVTL's eastern alignment. DNR supports this alignment because of its greater distance from Chandler Wildlife Management Area in Murray County. Of the alternatives, Xcel's preferred alignment will have the fewest natural resource impacts.

DNR Information: 651-296-6157 • 1-888-646-6367 • TTY: 651-296-5484 • 1-800-657-3929

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Minimum of 10% Post-Consumer Waste

4) Section 5.1: Substation Locations – Xcel Energy Preference (p.45)

DNR supports Xcel Energy's preferred Substation Site A primarily because this location facilitates an eastern alignment of the 115kV HVTL. DNR would like to work with Xcel Energy to determine a specific location for the Nobles County Substation.

5) Section 6.4: Waterfowl Collisions – Mitigation (p.57)

DNR supports Xcel Energy's efforts to route the transmission lines away from wetlands and other areas used by waterfowl. Selecting route alternatives in this manner reduces the potential for avian collisions with transmission lines. Bird flight diverting devices and H-frame transmission line structures further reduce this potential. The DNR wishes to work with Xcel Energy to identify areas where the potential for avian collisions exists.

Minnesota Statutes §116C.61

Minnesota Statutes §116C.61, Subdivision 3 requires state agencies authorized to issue permits for construction of HVTLs to state whether the site, and other design matters, under consideration for approval by the Environmental Quality Board will be in compliance with agency standards, rules or policies. Project construction and operation will require a License to Cross Public Waters and a Public Waters Work Permit from the DNR, as is noted in the DEIS. Project construction and operation will be in compliance with DNR's standards, rules and policies.

Thank you for the opportunity to review this document. Please contact me with any questions regarding this letter.

Sincerely,



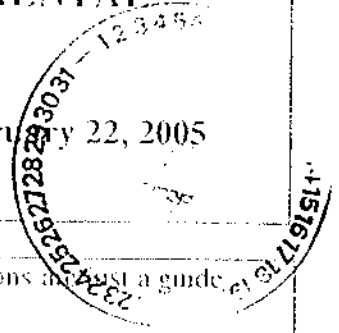
Matt Langan, Environmental Planner
Environmental Policy & Review Unit
Division of Ecological Services
(651) 297-3359

c: Commissioner Gene Merriam, Cheryl Heide, Lee Pfannmuller, Tom Balcom, Shannon Fisher, John Wachtler - EQB



COMMENT ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

Xcel Energy Split Rock 345/115 kV Line
Formal Comments on the draft EIS Due by February 22, 2005
www.eqb.state.mn.us



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- Do you think the draft EIS addresses the most important issues?
- Any other comments? For example, thinking ahead to the formal hearings, which route or substation site do you think is the best option? Why?

To Whom It May Concern,

We would like to respond to the Nobles County Chanarambie 115 KV line Xcel Energy Windfarm Transmission Improvement Project. The farm we would like to address is the South Half of Section 15 in Wilmont Township, Nobles County. The route of the line across this farm on the map shows it going right thru the middle of the section north and south. This is a big concern of ours because we farm this land with our crop rows going east and west. This South Half Section does not have a fence line dividing the land. This would put the line running in the opposite direction of the way we plant our crop rows. This means the line would go across the middle of our field instead of across the end of the field as in other proposed routes. As we farm our field, we would constantly be going around posts instead of going around them once if they were on the end or side of the field.

Another big concern about going across the middle of the field is underground water tile lines. Some of these we know where they are and some we don't. If
(OPTIONAL) (See other side)

Name:

Address

Potential route crosses your land?

Please provide county, township, section

Use back of the page (or additional sheets) if you need more room.

Please turn in tonight or mail by February 22, 2005 to:

John Wachtler or George Johnson
MEQB Energy Facility Permitting
658 Cedar Street, 300 Centennial Building
Saint Paul, Minnesota 55155
John.wachtler@state.mn.us or george.johnson@state.mn.us

Additional Comments

these tile lines were damaged when the posts are set, we would have drainage problems on this land. This would be costly to fix especially if you don't know which line is damaged and where it is at in the field.

We think the solution is to run the wire parallel with the roads either to the north or to the west where they should be. The reasoning for this is as we are farming the land once we are past the posts the first time, we are done going around them and can farm the rest of the ground normally. As far as the tile are concerned, if a line is damaged it would be at the beginning or end of the tile line versus hitting the middle of the tile line out in the center of the field. This would make it a lot easier to find and less costly to fix.

In conclusion, we do not want the wire going across the middle of our land as this land is undivided going east and west with no fence line. We want it to run parallel with the roads where it belongs.

Sincerely,

Melvin Fuerstenberg
Agatha Fuerstenberg
Leona Fuerstenberg

LANDOWNERS

Melvin & Agatha Fuerstenberg

1947 Cecilee Street

Worthington MN 56187

Phone (507) 376-3538

Leona Fuerstenberg

1065 Miles Drive

Worthington MN 56187

Phone (507) 376-4589

Robert Fuerstenberg
Teresa Fuerstenberg

RENTERS

Robert & Teresa Fuerstenberg

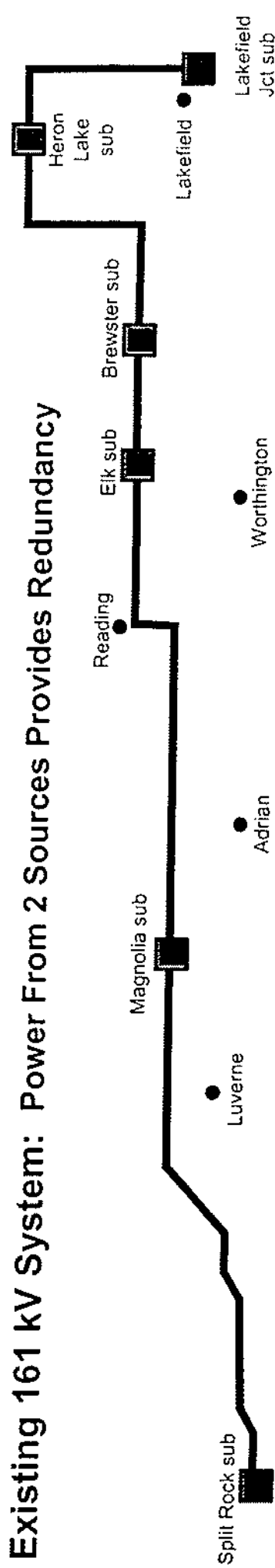
12608 Edwards Avenue

Wilmont MN 56185

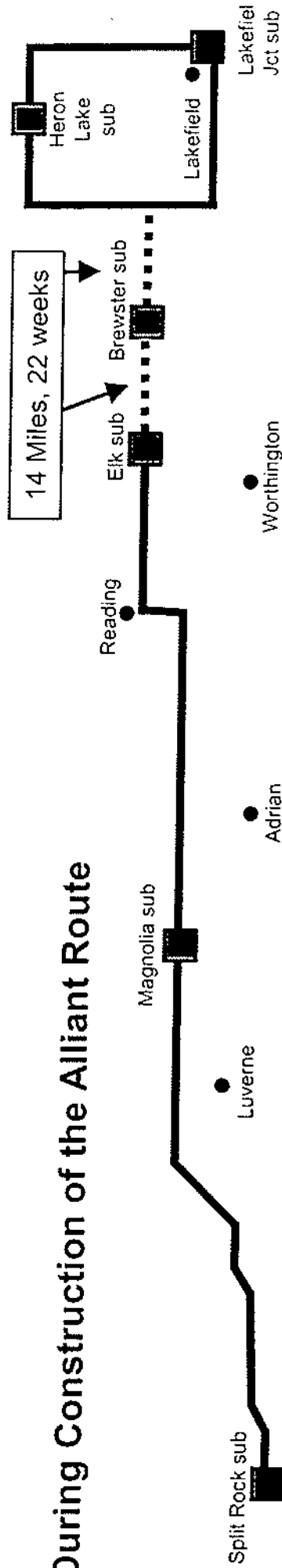
Phone (507) 472-8478

Increased Outage Risk During Construction

Existing 161 kV System: Power From 2 Sources Provides Redundancy



During Construction of the Alliant Route



During Construction of the Modified Interstate Route



..... 161 kV Line Segment(s) Out for Construction

■ Power Source to 161 kV System

—— New 345 kV Line Segment Temporarily Energized at 161 kV

Position on Use of Diesel Generation **Xcel Energy Split Rock to Lakefield Jct 345 kV Project** **Grant Stevenson, Project Manager, March 4, 2005**

Xcel Energy does not plan to use and does not support the use of diesel standby generators during the construction of the Split Rock to Lakefield Junction 345 kV line or other transmission lines. We do not know of a situation where temporary standby generators have been installed during the reconstruction of a transmission line. We have provided information on the use of diesel generation in our response to IR 11 and in this document solely because the question has been asked by the Environmental Quality Board staff and others.

Standby generators work well for small commercial applications when used to backup critical operations. In these situations the generators are usually paired with a battery-powered uninterruptible power supply (UPS). When utility power is lost, the UPS provides power to the load until the generators can automatically start, ramp up to full output and power the load.

Twenty two 1.6 MW generators would be needed to provide backup to Elk Substation. Connecting and successfully operating such an array of generation would require significant engineering and investment in temporary substation equipment (\$1 million).

Xcel Energy views the use of diesel generation during construction of this project to be very problematic and an unnecessary expense given the alternative available (the Modified I-90 Route). The use of diesel generators-- even in standby mode -- would add almost \$4 million to the cost of the project.

The table below provides a breakdown of estimated costs to install and operate diesel generation in various configurations that have been discussed. Not included in the table are the additional costs to obtain and comply with air emission permits. We have not had discussions with the Pollution Control Agency (PCA) and do not know whether the PCA would grant a permit for such an installation and what permit conditions would be imposed.

Note	Option	345 Line Costs	Generator Rental	Fuel	Substation	Subtotal Generator Option	Total	Incremental Cost Relative to Modified I-90 Route
	Modified I-90 Route	\$ 51,025,000					\$ 51,025,000	
	Alliant Route (with Option B)	\$ 58,549,000					\$ 58,549,000	\$ 7,524,000
1	Alliant with Standby Generation	\$ 58,549,000	\$ 2,400,000	\$ 400,000	\$ 1,000,000	\$ 3,800,000	\$ 62,349,000	\$ 11,324,000
2	Alliant with Continuous Minimum Generator Output	\$ 58,549,000	\$ 4,900,000	\$ 6,000,000	\$ 1,000,000	\$ 11,900,000	\$ 70,449,000	\$ 19,424,000
3	Alliant with Continuous Full Generator Output	\$ 58,549,000	\$ 4,900,000	\$ 17,800,000	\$ 1,000,000	\$ 23,700,000	\$ 82,249,000	\$ 31,224,000

This table does not include probable additional costs to comply with air emission permits

Notes:

- 1 Standby Generation -- Generation started after outage to customers occurs. Customer load would be switched to match load to generation, and load would be restored in approximately 1 hour. This option would reduce the length of a long outage. Fuel costs assume 100 hours of operation.
- 2 Continuous Minimum Generation -- The minimum load level to avoid damage to a diesel engine is 25% load. This is not a viable option because generators operating at minimum cannot respond quickly enough when utility power is lost. As a result, there is a mismatch of load to generation and the control system would shut down the diesels. Consequently, there would still be a delay of approximately 1 hour before service could be restored.
- 3 Continuous Full Generation -- Generation feeds the load continuously allowing for seamless service in event of outage. The remaining 161 kV transmission line provides the N-1 reliability redundancy.

John Wachtler

From: Post Swine Farms, Inc. [psfarms@swwnet.com]
Sent: Monday, February 14, 2005 5:47 PM
To: John Wachtler
Subject: EQB letter to J. Wachtler

February 14, 2005

John N. Wachtler
Minnesota Environmental Quality Board
658 Cedar Street
St. Paul, MN 55155

Re: Docket M EQB No. 03-73-TR-Xcel
EQB Data Request Number 10

Dear Mr. Wachtler,

Following are some discrepancies found on pages of the foregoing request.

Route segment 18 in the area near Post's house on I-90 is in section 18 Rost township. It is not in Ewington township.

The item on the bottom of the first page makes comment to the Little Sioux River Tributary. It is on the North side of the North I-90 fence. It not on the South side of I-90 as is on the map. I have drawn this on the accompanying map. The following Photo's show the earthen berm located North of the Little Sioux Channel next to an open gravel pit. There could be no poles erected on the earthen berm as it is used for a driveway between the channel and the gravel pit and the berm is not wide enough. If the poles were to be erected in the gravel pit, they would be that much closer to the farmstead and residence. Taking all this into consideration, the power line would be much closer to the house than the first paragraph on page two suggests. Also the area where the children play would only be 200 feet from the power line. This is totally unacceptable.

The first paragraph of page three is not in our segment of property but it suggests on Map 4 & 5 is the Post house. Is there another Post house on the I-90 corridor near Luverne?

I hope these comments are helpful and we appreciate all your consideration.

Sincerely, Eric A. Post

David H.Post





**Testimony of
Michael Steckelberg
Project Engineer
Great River Energy
For the Xcel Energy Split Rock to Lakefield Junction 345 kV Line**

Introduction:

My name is Michael Steckelberg. I am employed as a transmission planning engineer in the System Operations Department of Great River Energy, 17845 East Highway 10, Elk River, Minnesota. I have a Bachelor of Electrical Engineering degree from the Institute of Technology, University of Minnesota, Minneapolis. I have 22 years of experience in planning of electrical transmission systems; 20 years with Great River Energy (GRE).

My present responsibilities include analysis of the GRE electric transmission needs for the GRE member cooperative loads in southwestern Minnesota, including Federated Rural Electric Association in Jackson, Minnesota; Nobles Cooperative Electric in Worthington, Minnesota; Redwood Electric Cooperative in Clements, Minnesota; and South Central Electric Association in St. James, Minnesota.

Reason for Testimony:

I am providing this testimony on behalf of GRE System Operations and the GRE members who have several loads whose service reliability may be affected by the line route that is chosen by the Minnesota Environmental Quality Board (EQB). The purpose of the testimony is to highlight those impacts on service reliability, particularly the fact that the existing backup (loop-feed) sources to those loads will be taken out of service during extended periods during construction of the new Xcel Energy 345 kV line from Lakefield Junction to Split Rock. The length of time, and therefore the associated risk to the reliability of the service to the loads, will depend on which on which route is selected by the EQB.

It should be noted that this area (southwestern Minnesota) is prone to unexpected severe weather such as icing, blizzards, high winds, etc. that can occur during off-peak electrical load conditions---the same loading conditions that allow the affected transmission 161 kV circuit to be taken out for construction. This type of weather can have catastrophic effects on the electrical transmission since the damage to the transmission can be quite extensive, e.g. miles of transmission on the ground. This type of damage can take days, weeks, or months to repair. Also, the time required to get to the affect area is greatly extended due to the hazardous travel conditions with which line crews will have to contend.

Existing Transmission to GRE Load

Much of the load in the area along the proposed route for the new 345 kV line from the Lakefield Junction substation to the Split Rock substation is served from a single, Alliant Energy/Xcel Energy 161 kV line from the Lakefield Junction substation to the Split Rock substation. GRE members' substation loads served by the existing 161 kV line are as follows:

- Magnolia substation (1-161/69 kV transformer and 1-69/24 kV transformer): Adrian, Lismore and Rushmore substations.
- Elk Substation (2-161/69 kV transformers): Worthington substation
- Brewster substation (1-161/12.5 kV distribution transformer):
- Heron Lake (2-161/69 kV transformers): Bingham Lake, Bloom, Enterprise, Fulda, Jeffers, Lakeside, Miloma, Minnetonka, North Storden, Round Lake, South Storden, West Lakefield, and Wilder substations

Impact of route selection on GRE loads

The choice of which route, the I-90 "Interstate" route or the "Alliant" route, could significantly affect the service reliability to GRE loads served by the existing Alliant 161 kV transmission line. If the "Alliant" route is selected the loads would be served from single transmission for extended periods of time (80 weeks) and result in much longer exposure to lengthy service outages in the event of a transmission outage (due to weather, accident, etc.). In the "Interstate" route alternative, the amount of time that loads are on radial transmission is significantly less at 18 weeks.

Cost of Electrical Outages

It is often difficult to quantify the cost of electrical service interruptions for smaller electrical users such as residential customers, the lack of heat, water, lights, and other electric equipment to keep household and farming operations going will directly impact those customers. The means that these customers use to "handle" the interruption will vary and thus will the costs. Some will have backup heat and lights. Some will just get colder.

However, larger electric consumers, such as the Minnesota Soybean Processor plant at Brewster, do know, fairly accurately, the approximate costs for electrical outages. These cost can run between \$3000 to \$3500 per hour. As mentioned above, the fact that this load might be single-sourced for extended periods of time, could result in much longer outage time and therefore higher outage costs if an outage occurs and the "Alliant" route is chosen.

However customer costs associated with an electrical outage are calculated or estimated, the path of least risk, i.e., a construction plan that reduces the amount of single-sourcing (the I-90 route), would be the better choice if all other factors (cost and construction time) are relatively equal.

Other Factors

Based on Xcel Energy's estimates the cost of the "Interstate" route is approximately \$8.5 million less than the "Alliant" route. Also, the in-service date for the "Interstate" route is one year earlier than the "Alliant" route. Each of these factors, if taken independently, would lean toward the "Interstate" route.

Recommendation

I recommend, on behalf of GRE and its members, that the EQB approve the "Interstate" route (I-90) for the following reasons:

- The amount of time that load is at risk is significantly less; 18 weeks versus 80 weeks.
- Less total cost of construction; save 8 million dollars
- Faster construction; in-service one-year earlier.

Questions?

I am willing to answer any questions about the impacts of this project on GRE and its members.

Respectfully submitted by:

Michael Steckelberg
Project Engineer
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EQB Staff Summary of Public Comments at March 1- March 4 Hearings
Regarding factual or other EIS related information.
Actual comments available in Hearing Transcript upon request

	Hearing Date	Comment
David Cranston	Mar. 1, 2005	Will proposed route in segment T-14 follow fence-lines or go through the middle of field on my property
Jennifer Moore/ Ken Leier Alliant Energy	Mar. 1, 2005	Comments indicating that Alliant Energy was opposed to double-circuiting the existing 161 kV line with the proposed Xcel 345 due to reliability , time and cost concerns. Alliant prefers Interstate 90 route.
Milton Fricke	Mar. 1, 2005	Owens property around Lakefield Junction substation. Requested more detail regarding final design of lines if route through his property is selected by EQB.
William Head, MISO	Mar. 1, 2005	Explained the role of MISO and their involvement with issues of transmission system reliability
Mike Steckelberg, GRE	Mar. 1, 2005	Stressed the importance of reliable electrical service to all Great River Energy customers. Urged EQB to support Interstate 90 Route option.
Eric Post	Mar. 1, 2005	Citizen is strongly concerned about potential health impacts from power line EMF, economic and aesthetic impacts of proposed lines that would run near his farm. See EIS comment letter and attached photographs.
Bob Pauling	Mar. 1, 2005	Concerned about separation distance from proposed line to his home. Also concerned that he as a long-term tenant was not directly notified of process. Also concerned about EMF-health issues
Mary Jane Pauling	Mar. 1, 2005	Concerned about separation distance from proposed line to hers home. Also concerned about EMF-health issues. She has a medical condition which she believes may be related to power-line effects.
Merlin Tordsen	Mar. 1, 2005	Concerned about separation distance from proposed line to his home. Also concerned about EMF-health issues. He referred to anecdotal evidence of people living near power-lines dying of EMF effects.
Tom Voehl	Mar. 1, 2005	Concerned about details of landowner compensation for transmission structures and easements. He would prefer that farmers are compensated in a manner similar to wind tower owners.
Luke Henning	Mar. 1, 2005	Concerned about precise details of eminent domain process, procedures and landowner recourse. He was especially interested in amounts of money offered to landowners. He also wanted to know how eminent domain and easements would impact his

		ability to build wind turbines in the future if he chose to do so.
Jim Jones Jr.	Mar. 2, 2005	Concerned about liability insurance requirements if transmission structures were placed on his property. He also wanted to know about easement compensation and reimbursement for any lost government payment programs he might otherwise be eligible for if structures were not there. Suggested that wind tower owners provide financial compensation to landowners impacted by transmission lines. Suggested increasing utility rates to compensate landowners along proposed transmission lines. He also mentioned concerns about impact on local township roads.
Robert and Teresa Fuerstenberg	Mar. 2, 2005	Concerned about route which potentially dissects the middle of their existing farm. They are also concerned about damage to drain tile on their property.
Jeanne VanBalen	Mar. 2, 2005	Testified regarding economic, agricultural and historic value of farm and potential impact of HVTL.
Tom Soderholm	Mar. 2, 2005	Concerned about double-circuiting of power lines near town of Reading and long-term expansion plans if wind power grows in the region. He was also interested in technical details of transmission towers and lines and land owner compensation for easements.
Bob Kirchner	Mar. 2, 2005	He was concerned about technical details of transmission towers and lines and land owner compensation for easements.
Paul Schotte	Mar. 2, 2005	He was concerned about specific location of proposed structures, technical details of transmission towers and lines, land owner compensation for easements and how County Assessors would evaluate land with transmission lines for taxation.
Steven Schneider	Mar. 3, 2005	Nobles County Public Works Director. He was concerned about how the construction of transmission lines would be coordinated with the needs of the highway department to minimize road safety hazards. He explained that the County wished Xcel to plan pole locations with them to ensure that critical areas were properly dealt with in power pole installation. He offered to identify critical areas once Xcel had received their final route permit.
Lloyd DeBoer	Mar. 3, 2005	Concerned about satellite TV and telephone interference by HVTL lines.
Ron Fick	Mar. 3, 2005	Concerned about the Interstate 90 route near Laverne exit. He has development property at this junction and is concerned the HVTL will negatively affect his ability to develop the property. Also is invested in wind power development. He asked about eminent domain procedures.
Jim Willers	Mar. 3, 2005	Concerned about the Interstate 90 route near Beaver Creek and how transmission lines are constructed to deal with highway interchanges.
Lowell Binford	Mar. 3, 2005	Concerned about the ultimate fate of the existing Alliant line, if the Interstate 90 route is chosen.
Carol Overland	Mar. 3, 2005	Raised a number of technical questions on long-range energy

		planning citing the CapX2020 study and the Buffalo Ridge Incremental Study extensive project staging and use of backup generators to maintain power supply and reliability during critical phases of line construction; electrical equipment types and configurations, easement negotiations and wanted to make sure all landowners along the potential 345 kV lines were aware of the "Buy the Farm" provisions. See transcript for detailed questions.
Marlin Bootsma	Mar. 3, 2005	Concerned about the ultimate fate of the existing Alliant line, if the Interstate 90 route is chosen.
Grant Post	Mar. 3, 2005	Concerned about the proliferation of transmission lines in the area. He wants to minimize the number of structures placed on farmland. He hopes to preserve as many trees as possible with this project.
Brenda Heard	Mar. 3, 2005	Concerned about the exact location of proposed transmission lines near her home. She was also interested in issues of landowner compensation and eminent domain. She also had some concern about cell phone and satellite TV interference from the transmission lines.
Richard Amendt	Mar. 3, 2005	Concerned about the exact location of proposed transmission lines near his home. He owns property along both 345 route alternatives and was trying to understand the process and when final route decisions would be made.
Bill Finck	Mar. 3, 2005	Concerned about stray voltage phenomena.
Gary Carlson	Mar. 3, 2005	Concerned about the exact location of proposed transmission lines near his home and details of structures to be used.
Steve Gleis	Mar. 4, 2005	Concerned about the exact location of proposed transmission lines near his home and details of structures to be used.
Jim Kluis	Mar. 4, 2005	Reiterated concern about "west" 115 kV route near home destroying tree groves, and the availability of other routes that would avoid the problem.
Randy Groves	Mar. 4, 2005	County Highway Engineer discussed road issues in connection with possible transmission line routes
Gordon Groen	Mar. 4, 2005	Expressed concern about relationship between Xcel's transmission lines and the development of wind power towers as well as some concerns about landowner compensation and notification.
Michael Groen	Mar. 4, 2005	Extensive questions regarding Xcel Energy right-of-way procedures. Direct EIS comment regarding how the pre-existing wind rights affected transmission line planning and placement. Asked (along with other nearby residents along 115 kV "East" route, whether actual water area of Chandler WMA was far enough west of existing line on "west" 115 kV route to avoid any serious impact on waterfowl. So therefore west route may not really cause waterfowl impact problems.

Xcel Energy 345/115 kV EQB staff summary of EIS comments at Hearing

Glenn Tulsma	Mar. 4, 2005	Concerned about the exact location of proposed transmission lines, details of structures to be used and how these would affect township roads.
Todd Platt	Mar. 4, 2005	Small landowner along route. He wanted to know details of the project and its progress. He also had questions on property value impact from transmission lines.

Name	Date	Verbal Comment at EIS meeting
Kent Slater; Also Nobles County Planning Commission members	Feb 9, 2005	Why would Xcel Energy have to put their utility poles five feet into private fields when the route is along township roads? Unlike county roads, many of these township roads are little used, often dirt, roads that are almost certainly not going to be expanded in the future to accommodate trucks or other farm machinery. So future liability for moving the poles due to roadway expansion is very seldom really an issue on township roads. So the utility should save themselves some money by avoiding paying for private easements from farmers and avoid disrupting farming operations by putting poles along township roads in the roadway right-of-way instead of into farmer's fields.